

AD-A061 861

BOEING VERTOL CO PHILADELPHIA PA

F/G 1/3

INTERACTIONAL AERODYNAMICS OF THE SINGLE ROTOR HELICOPTER CONF--ETC(U)

SEP 78 P F SHERIDAN

DAAJ02-77-C-0020

UNCLASSIFIED

USARTL-TR-78-23F

NL

1 OF 4
ADA
061861



18 19
USARTL TR-78-23F

LEVEL *TH*



6
INTERACTIONAL AERODYNAMICS OF THE SINGLE
ROTOR HELICOPTER CONFIGURATION

VOLUME VI-B - One-Third Octave Band Spectrograms of Wake
Single Film Data, Basic Configuration Wake Explorations

AD A061861
FILE COPY

10
Philip F. Sheridan
Boeing Vertol Company
P.O. Box 16858
Philadelphia, Pa. 19142

12 374p.

15 DAAJ02-77-C-0020

16 IL262209AH76

14
September 1978

17 00

Final Report for Period March 1977 - February 1978

Approved for public release;
distribution unlimited.

DDC
RECEIVED
DEC 6 1978
D

Prepared for
APPLIED TECHNOLOGY LABORATORY
U. S. ARMY RESEARCH AND TECHNOLOGY LABORATORIES (AVRADCOM)
Fort Eustis, Va. 23604

403 682 78 12 04.020

JOB

APPLIED TECHNOLOGY LABORATORY POSITION STATEMENT

In 1975 a wind tunnel test program was conducted in the Boeing-Vertol 20-foot V/STOL Wind Tunnel on a 1/5th-scale UTTAS model to investigate and find solutions for several aerodynamic problems encountered during the UTTAS flight-testing. Specifically, these tests focused upon (a) the structure of the hub/rotor wake in the vicinity of the empennage, (b) the formulation of the ground vortex and its relation to hub loads and fuselage loads during transition, and (c) the occurrence of vibratory air pressures from the blade passing over the fuselage. Only portions of the above-mentioned wind tunnel test data were reduced and analyzed in addressing the flight-test problems of the UTTAS aircraft.

Under Contract DAAJ02-77-C-0020, Boeing-Vertol completed analyses on the data to understand more completely the aerodynamic interactions that are involved and to formulate instructions for the guidance of designers in these respects. The results of these studies are applicable to all existing and future single-rotor/tail rotor helicopters. The data have been segregated according to aerodynamic interactions and associated phenomena/problem areas. From this body of knowledge, a generalized set of design guidelines meaningful to the single-rotor helicopter design concept formulation were developed and are included in these reports.

Mr. Robert P. Smith of the Aeronautical Technology Division, Aeromechanics Technical Area, served as project engineer for this effort.

DISCLAIMERS

The findings in this report are not to be construed as an official Department of the Army position unless so designated by other authorized documents.

When Government drawings, specifications, or other data are used for any purpose other than in connection with a definitely related Government procurement operation, the United States Government thereby incurs no responsibility nor any obligation whatsoever; and the fact that the Government may have formulated, furnished, or in any way supplied the said drawings, specifications, or other data is not to be regarded by implication or otherwise as in any manner licensing the holder or any other person or corporation, or conveying any rights or permission, to manufacture, use, or sell any patented invention that may in any way be related thereto.

Trade names cited in this report do not constitute an official endorsement or approval of the use of such commercial hardware or software.

DISPOSITION INSTRUCTIONS

Destroy this report when no longer needed. Do not return it to the originator.

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

DD FORM 1 JAN 73 1473 EDITION OF 1 NOV 65 IS OBSOLETE

SECURITY CLASSIFICATION OF THIS PAGE (When Data Entered)

78 12 04.020

PREFACE

LEVEL II

The entire report describing the investigation of **INTERACTIONAL AERODYNAMICS OF THE SINGLE-ROTOR HELICOPTER CONFIGURATION** comprises eight numbered volumes bound as 33 separate documents. The complete list of these documents is as follows:

ACCESSION NO.	
DTIC	Write Section <input checked="" type="checkbox"/>
DDC	Ref. Section <input type="checkbox"/>
UNANNOUNCED	<input type="checkbox"/>
JUSTIFICATION	
BY	
DISTRIBUTION/AVAILABILITY CODES	
Dist.	AVAIL. and/or SPECIAL
A	

Volume I, Final Report

Volume II, Harmonic Analyses of Airframe Surface Pressure Data

- A - Runs 7-14, Forward Section
- B - Runs 7-14, Mid Section
- C - Runs 7-14, Aft Section
- D - Runs 15-22, Forward Section
- E - Runs 15-22, Mid Section
- F - Runs 15-22, Aft Section
- G - Runs 23-33, Forward Section
- H - Runs 23-33, Mid Section
- I - Runs 23-33, Aft Section

Volume III, Flow Angle and Velocity Wake Profiles in Low-Frequency Band

- A - Basic Investigations and Hubcap Variations
- B - Air Ejector Systems and Other Devices

Volume IV, One-Third Octave Band Spectrograms of Wake Split-Film Data

- A - Buildup to Baseline
- B - Basic Configuration Wake Explorations
- C - Solid Hubcaps
- D - Open Hubcaps
- E - Air Ejectors
- F - Air Ejectors With Hubcaps; Wings
- G - Fairings and Surface Devices

Volume V, Harmonic Analyses of Hub Wake

Volume VI, One-Third Octave Band Spectrograms of Wake Single Film Data

- A - Buildup to Baseline
- B - Basic Configuration Wake Exploration
- C - Hubcaps and Air Ejectors

Volume VII, Frequency Analyses of Wake Split-Film Data

- A - Buildup to Baseline
- B - Basic Configuration Wake Explorations
- C - Solid Hubcaps

→ This volume is

- D - Open Hubcaps
- E - Air Ejectors
- F - Air Ejectors With Hubcaps; Wings
- G - Fairings and Surface Devices

Volume VIII, Frequency Analyses of Wake Single Film Data

- A - Buildup to Baseline
- B - Basic Configuration Wake Exploration
- C - Hubcaps and Air Ejectors

TABLE OF CONTENTS

	<u>PAGE</u>
INTRODUCTION	6
OUTLINE OF WAKE INVESTIGATIONS (TABLE 1)	7
LIST OF TEST RUNS (TABLE 2).	11
INDEX TO RAKE POSITIONS (TABLE 3)	18
RAKE ORIENTATION DIAGRAM (FIGURE 1)	24
HOT FILM RAKE LOCATIONS (FIGURE 2-6).	25
UTTAS 1/4.85 - SCALE MODEL GEOMETRY AND PRESSURE TRANSDUCER LOCATIONS (FIGURE 7)	30
ONE THIRD OCTAVE BAND IDENTIFICATION (TABLE 4)	31
SINGLE-FILM 1/3 OCTAVE BAND CHARTS	32

INTRODUCTION

Volume VI presents spectrograms of the six velocity measurements from the single film transducers which were located outboard on the wake rake to the left and right of the split film transducers. These plots are similar to those of Volume IV E, being machine plotted spectrograms in the one-third octave band format. They relate directly to the standard spectrograms that appear in Volume VIII for the same set of runs.

The sub-volumes of Volume VI display data derived from the following test runs:

Volume VI-A - 149, 150, 160, 156, 158, 159
Volume VI-B - 111 -119, 121
Volume VI-C - 135, 136, 188, 211, 168, 167, 194, 161, 154, 172,
174, 176, 203, 205, 197

The runs follow the order of the logical arrangement of the Outline of Wake Investigations, Table 1, from which they have been selected. The Table I outline and other material is included for reference and as context to the work of each sub-volume. Table 2, the List of Test Runs, arranges the runs in numerical order and gives pertinent text parameters.

The Index of Rake Positions, Table 3, lists the hot film transducer rake positions in the model coordinate system for each run and its test points. The main feature of Table 3 is the indexing of the test point number to the model water line station and butt line as it varied from run to run. The table groups the runs as they shared the indexing correspondence of point with position. It is emphasized that the runs in a group do not necessarily all share the same number of test points but they do have same correspondence within their respective ranges of test points.

The orientation of the rake is shown pictorially in Figures 1 through 6 for the various test runs. Figure 7 presents a scaled drawing of the model with reference to the three-axis coordinate system. Table 4 lists the center frequency and the upper and lower band limits for each of the numbered one-third octave bands.

TABLE 1			
OUTLINE OF WAKE INVESTIGATIONS			
Description	Configuration Code	Run No.	Base-line
<u>Build-up to Baseline</u>			
1. Nacelles removed	$K_{13}+H_1-N$	149	150
2. Blades off, rotating hub	$K_{13}-M+H_{1.0}$	160	156
3. " " , non-rotating hub	$K_{13}-M+H_{1.0}$	158	156
4. " " , hub off	$K_{13}-M-H_{1.0}$	159	156
<u>Basic Configuration</u>			
<u>1. Wake Explorations near Empennage</u>			
(a) 15" Long. + traverse at T/R C.L.	K_{11}	111	---
(b) 9" Vert. + " above T/R "	"	112	---
(c) 2" " " in vortex	"	113	---
(d) 8" " " (continue 112)	"	114	---
(e) 13" " " behind stab.	"	115	---
(f) Lateral traverse, left stab. (One T.P. only)	"	116	---
(g) Same continued	"	117	---
(h) Same continued (One T.P. only)	"	118	---
(i) Lateral traverse right stab.	"	119	---
(j) T/R effect on wake	$K_{11}+T_2^0$	121	115
<u>2. Climb/Descent Studies</u>			
(a) Climb 900 FPM	K_{11}	135	---
(b) Descent 800 FPM	"	136	---
<u>Effect Of Hub Caps</u>			
<u>1. Solid Caps on Canister</u>			
(a) 7.6" diam. 2.17" ht. soft Pitch Arms	$K_{11}-H_{1.0}+H_{1.2}$	137	136
(b) 7.6" diam. 2.17" ht. stiff Pitch Arms	$K_{13}+H_{1.2}$	153	156
(b) 7.6" diam. 2.45" ht. flt. test config.	$K_{13}+H_{1.2.1}+I_1+E_{1.0}$	207	188

TABLE 1 (CONTINUED)

OUTLINE OF WAKE INVESTIGATIONS

Description	Configuration Code*	Run No.	Base-line
<u>Effect of Hub Caps (Continued)</u>			
2. <u>Solid Caps Raised Above Canister</u>			
(a) 7.6" diam. 2.45" ht. 70" depth, .55 gap	$H_{1.2.2} + I_1 + E_{1.0}$	208	188
(b) 10.0" diam. 3.25" ht. 1.55" depth, .50" gap	$H_{1.8.1} + I_1 + E_{1.0}$	189	188
(c) 10.0" diam. 4.125" ht. 2.05" depth, .875" gap	$H_{1.8.2} + I_1 + E_{1.0}$	190	188
(d) Repeat of 189	" " "	210	188
3. <u>Open Caps Without Underbody</u>			
(a) 10.0" diam. 1.25" gap, blades	$H_{1.0.2} + I_1 + E_{1.0}$	193	188/166
(b) " " " gap, no blades	$H_{1.0.1} - M$	166	158
(c) " " 2.05" gap, blades	$H_{1.14.1} + I_1 + E_{1.0}$	211	188
(d) " " 1.75" gap, no blades	$H_{1.0.1} - M$	165	158
(e) " " 1.87" gap, blades	$H_{1.0.3} + I_1 + E_{1.0}$	191	188
(f) 16" diam. 2.00" gap, blades	$H_{1.7.1}$	168	156/167
(g) " " " gap, no blades	$H_{1.7.1} - M$	167	158
(h) " " 4.00" gap, blades	$H_{1.7.2}$	169	156
4. <u>Open Caps with Underbody</u>			
(a) 7.6" diam. 1.25" gap	$H_{1.11.1} + I_2 + E_{1.0}$	194	188
(b) " " " "	$H_{1.11.1} + I_2 + E_{4.0}$	198	188
(c) " " " " center post	$H_{1.11.2} + I_2$	202	194
(d) 10.0" diam. .5" gap, no blades	$H_{1.5.1} - M$	164	158
(e) " " 1.25" gap, no blades	$H_{1.5.2} - M$	161	158
(f) " " 2.0" gap, no blades	$H_{1.5.4} - M$	163	158
(g) " " 4.0" gap, no blades	$H_{1.5.3} - M$	162	158
(h) " " 1.25" gap	$H_{1.5.2}$	154	156/161
*Basic Code is K13.			

TABLE 1 (CONTINUED)

OUTLINE OF WAKE INVESTIGATIONS

Description	Configuration Code*	Run No.	Base-line
<u>5. Miscellaneous Hub Covers</u>			
(a) Hub fairing 16" diam.	H _{1.3}	151	150
(b) Wham-O-Frisbee 10" diam.	H _{1.9.0} +E _{1.2}	182	181
(c) Fab. glass Frisbee 16" diam.	H _{1.9.1} +E _{1.2}	183	181
<u>Effect of Air Ejectors</u>			
1. Basic system no blowing	H _{1.0} +E _{1.0}	172	156
2. " " 40 psi	" "	173	156/172
3. " " 150 psi	" "	174	156/172
4. Wide chord shroud 40 psi	H _{1.0} +E _{2.5.1}	175	156/173
5. Wide " " 150 psi	" "	176	156/174
6. W/C shroud w. lip 40 psi	H _{1.0} +E _{3.5.2}	184	156/173
7. Same Contoured Parallel 150 psi	H _{1.0} +E _{3.5.4}	187	156/174
8. Bifurcated duct 0 psi	H _{1.0} +E _{5.0}	203	156
9. " " 40 psi	" "	204	156/203
10. " " 150 psi	" "	205	156/203
<u>Air Ejectors with Open Hub Caps with Underbodies</u>			
1. 7.6" diam. 1.25" gap, 0 psi	H _{1.11.1} +I ₂ +E _{1.0}	194	188/172
2. " " " " 20 psi	" " "	195	188
3. " " " " 40 psi	" " "	196	188/173
4. " " " " 150 psi	" " "	197	188/174
5. " " " " 0 psi	H _{1.11.1} +I ₂ +E _{4.0}	198	188/194
6. " " " " 40 psi	" " "	199	188/196
7. " " " " 150 psi	" " "	200	188/196
8. Same with center post	H _{1.11.2} +I ₂ +E _{4.6}	201	188/200
9. 10.0" diam. 2.0" gap wide ch'd. shroud (150 psi)	H _{1.5.4} +E _{2.5.1}	177	156/176
<u>Effect of Wings and Misc.</u>			
1. Wings			
(a) Nacelle-mounted stub wing	H _{1.0} +W _{1.0} +E _{1.1}	178	181
(b) Single slotted flapped wing	H _{1.0} +W _{3.0} +E _{1.0}	180	181
(c) Dougle slotted flapped wing	H _{1.0} +W _{2.0} +E _{1.0}	179	181
(d) Boom-mounted stub wing	H _{1.0} +W _{4.0}	186	156
*Basic Code is K13.			

TABLE 1 (CONTINUED)

OUTLINE OF WAKE INVESTIGATIONS

Description	Configuration Code*	Run No.	Base-line
2. Crown Fairings			
(a) Flat top behind shaft	$K_{11}+D_1$	140	138
(b) Round top behind shaft	$K_{11}+D_2$	141	138
(c) Extended flat top fairing	H_1+D_4	170	156
(d) Flat top + 16" cap, 4" gap	$H_{1.7.2}+D_4$	171	170
(e) Forward fairing/nacelle fairing	$P_{1.0}$	152	156
3. Surface Devices			
(a) Vortex generators	$K_{11}+VG_{2.1}$	139	138
(b) Guidevane between nacelles	$K_{11}+FV_1$	142	138
(c) Longitudinal strakes	$H_{1.5.3}+S_4$	155	156
(d) 14% porosity spoiler	$K_{11}+X_1$	143	138
*Basic Code is K13 unless noted otherwise.			

TABLE 2
LIST OF TEST RUNS
BASIC INVESTIGATIONS OF THE HUB WAKE

RUN NO.	CONFIGURATION/CONDITION	VTUN KNOTS	RPM MR/TR	DISK LDG. psf	MODEL ANGLES		MR HT. h/d	TAIL ROTOR
					α°	ψ°		
111	K ₁₁ /15" Long. wake traverse at TR center line	80	1433/0	8	6.0	-2.0	∞	Off
112	" /9" Vert. wake traverse above TR center line	"	"	"	"	"	"	"
113	" /2" Vert traverse through MR vortex	"	"	"	"	"	"	"
114	" /8" Vert. traverse below TR center line	"	"	"	"	"	"	"
115	" /13" Vert. traverse behind stabilizer	"	"	"	"	"	"	"
116	" /Lateral traverse - left stabilizer	"	"	"	"	"	"	"
117	" /116 continued	"	"	"	"	"	"	"
118	" /116 continued	"	"	"	"	"	"	"
119	" /Lateral traverse - right stabilizer	"	"	"	"	"	"	"
121	K ₁₁ +T ₂ /Effect of tail rotor flow on wake	"	1433/4500	"	"	"	"	On
135	K ₁₁ /Wake in 900 fpm climb	"	"	"	-6.0	-4.5	"	Off
136	" /Wake in 800 fpm descent	"	"	"	6.0	+2.0	"	"

TABLE 2 (CONTINUED)
LIST OF TEST RUNS
EVALUATION OF WAKE-ALTERING DEVICES

RUN NO.	CONFIGURATION/CONDITION	VTUN KNOTS	RPM MR/TR	DISK LDG. psf	MODEL ANGLES		MR HT. h/d	TAIL ROTOR
					α°	ψ°		
137	K ₁₁ -H _{1.0} +H _{1.2} /Effect of 7.6 inch diam. solid hub cap	80	1433/0	8	6	-3.8	∞	Off
138	K ₁₁ /Repeat of base run	"	"	"	"	"	"	"
139	K ₁₁ +VG2.1/Effect of vortex generators on aft crown	"	"	"	"	"	"	"
140	K ₁₁ +D ₁ /Flat-topped "doghouse" fairing on aft crown	"	"	"	"	"	"	"
141	K ₁₁ +D ₂ /Rounded-top fairing	"	"	"	"	"	"	"
142	K ₁₁ +FV ₁ /Deflection vane on crown between nacelles	"	"	"	"	"	"	"
143	K ₁₁ +X ₁ /Variable porosity spoiler	"	"	"	"	"	"	"
149	K ₁₃ +H ₁ -N ₁ /Effect of nacelles off also add stiff pitch arms (K ₁₃)	60	1075/0	4.5	"	"	"	"
150	K ₁₃ +H ₁ /60 knot baseline	"	"	"	"	"	"	"
151	K ₁₃ +H _{1.3} /16 inch diam. helmet fairing	"	"	"	"	"	"	"
152	K ₁₃ +P _{1.0} /Pylon and intake fairings	80	1433/0	8	"	"	"	"
153	K ₁₃ +H _{1.2} /Repeat 137 with K ₁₃ pitch arms	"	"	"	"	"	"	"

TABLE 2 (CONTINUED)

LIST OF TEST RUNS

EVALUATION OF WAKE-ALTERING DEVICES

RUN NO.	CONFIGURATION/CONDITION	VTUN KNOTS	RPM MR/TR	DISK LDG. psf	MODEL ANGLES		MR HT. h/d	TAIL ROTOR
					α°	ψ°		
154	K ₁₃ +H _{1.5.2/10} " open hub cap, 7" underbody, 1.25" gap	80	1433/0	8	6	-3.8	∞	Off
155	K ₁₃ +H _{1.5.2} +S ₄ /Same as 154 except strakes on aft crown	"	"	"	"	"	"	"
156	K ₁₃ +H _{1.0} /Baseline with K ₁₃ , i.e., stiff pitch arms	"	"	"	"	"	"	"
158	K ₁₃ -M+H _{1.0} /Wake studies with blades off, hub not rotating	"	0/0	"	"	"	"	"
159	K ₁₃ -M-H _{1.0} /Wake studies with hub off	"	"	"	"	"	"	"
160	K ₁₃ -M+H _{1.0} /Same as 158 except hub is rotating	"	1433/0	"	"	"	"	"
161	K ₁₃ -M+H _{1.5.2} /Repeat of 154 without blades	"	0/0	"	"	"	"	"
162	K ₁₃ -M+H _{1.5.3} /Same as 161 except 4" gap	"	"	"	"	"	"	"
163	K ₁₃ -M+H _{1.5.4} /Same as 161 except 2" gap	"	"	"	"	"	"	"
164	K ₁₃ -M+H _{1.5.1} /Same as 161 except 0.5" gap	"	"	"	"	"	"	"
165	K ₁₃ -M+H _{1.0.1/10} " open hub cap, no underbody, same cap vert. position as Run 154	"	"	"	"	"	"	"
166	K ₁₃ -M+H _{1.0.2} /Same as 165 with cap lowered by 0.5"	"	"	"	"	"	"	"

TABLE 2 (CONTINUED)
LIST OF TEST RUNS
EVALUATION OF WAKE-ALTERING DEVICES

RUN NO.	CONFIGURATION/CONDITION	VTUN KNOTS	RPM MR/TR	DISK LDG. psf	MODEL ANGLES		MR HT. h/d	TAIL ROTOR
					α°	ψ°		
167	K ₁₃ -M+H _{1.7.1/16} " open cap, no underbody, 2" gap	80	0/0	8	6	-3.8	∞	Off
168	K ₁₃ +H _{1.7.1} /Blades on, same cap config. as 167	"	1433/0	"	"	"	"	"
169	K ₁₃ +H _{1.7.2/16} " open cap, no underbody, 4" gap	"	"	"	"	"	"	"
170	K ₁₃ +H _{1.0} +D _{4.0} /Extended flat top fairing on aft crown	"	"	"	"	"	"	"
171	K ₁₃ +H _{1.7.2} +D _{4.0} /Same fairing as 170 same cap as 169	"	"	"	"	"	"	"
172	K ₁₃ +H _{1.0} +E _{1.0} (0psi)/Basic air ejector zero blowing baseline	"	"	"	"	"	"	"
173	K ₁₃ +H _{1.0} +E _{1.0} (40 psi)/Same as 172 with 40 psi supply	"	"	"	"	"	"	"
174	K ₁₃ +H _{1.0} +E _{1.0} (150 psi)/Same as 172 with 150 psi supply	"	"	"	"	"	"	"
175	K ₁₃ +H _{1.0} +E _{2.5.1} (40 psi)/Ejector with wide chord shroud at 40 psi	"	"	"	"	"	"	"
176	K ₁₃ +H _{1.0} +E _{2.5.1} (150 psi)/Same as 174 with 150 psi supply	"	"	"	"	"	"	"
177	K ₁₃ +H _{1.5.4} +E _{2.5.1} (150 psi)/Same as 176 with 10" cap like 163	"	"	"	"	"	"	"
178	K ₁₃ +H _{1.0} +W _{1.0} +E _{1.1} (0 psi)/Nacelle mounted wing	"	"	"	"	"	"	"

TABLE 2 (CONTINUED)
LIST OF TEST RUNS
EVALUATION OF WAKE-ALTERING DEVICES

RUN NO.	CONFIGURATION/CONDITION	VTUN KNOTS	RPM MR/TR	DISK LDG. psf	MODEL ANGLES		MR HT. h/d	TAIL ROTOR
					α°	ψ°		
179	K ₁₃ +H _{1.0} +W _{2.0} +E _{1.0} (0 psi)/Double slotted flapped wing	80	1433/0	8	6	-3.8	∞	Off
180	K ₁₃ +H _{1.0} +W _{3.0} +E _{1.0} (0 psi)/Single slotted flapped wing	"	"	"	"	"	"	"
181	K ₁₃ +H _{1.0} +E _{1.2} (0 psi)/Baseline with ejector tube moved aft	"	"	"	"	"	"	"
182	K ₁₃ +H _{1.9.0} +E _{1.2} (0 psi)/Standard 10" frisbee	"	"	"	"	"	"	"
183	K ₁₃ +H _{1.9.1} +E _{1.2} (0 psi)/16" fabricated frisbee	"	"	"	"	"	"	"
184	K ₁₃ +H _{1.0} +E _{3.5.2} (40 psi)/Wide chord with lip at 40 psi	"	"	"	"	"	"	"
185	K ₁₃ +H _{1.0} +E _{3.5.2} (150 psi)/Same as 184 with 150 psi air	"	"	"	"	"	"	"
186	K ₁₃ +H _{1.0} +W _{4.0} /Boom mounted stub wing	"	"	"	"	"	"	"
187	K ₁₃ +H _{1.0} +E _{3.5.4} (150 psi)/Like 185 with modified shroud	"	"	"	"	"	"	"
188	K ₁₃ +H _{1.0} +I ₁ +E _{1.0} (0 psi)/Baseline with I ₁ instr. ring	"	"	"	"	"	"	"
189	K ₁₃ +H _{1.8.1} +I ₁ +E _{1.0} (0 psi)/Solid cap, 10" diam. 3.25" height	"	"	"	"	"	"	"
190	K ₁₃ +H _{1.8.2} +I ₁ +E _{1.0} (0 psi)/Same as 190 except + 4.12" height	"	"	"	"	"	"	"

TABLE 2 (CONTINUED)
LIST OF TEST RUNS
EVALUATION OF WAKE-ALTERING DEVICES

RUN NO.	CONFIGURATION/CONDITION	VTUN KNOTS	RPM MR/TR	DISK LDG. psf	MODEL ANGLES		MR HT. h/d	TAIL ROTOR
					α°	ψ°		
191	K13+H1.0.2+I1+E1.0 (0 psi)/10" cap, no underbody, 1.87" gap	80	1433/0	8	6	-3.8	∞	Off
193	K13+H1.0.2+I1+E1.0 (0 psi)/10" cap, no underbody, 1.25" gap	"	"	"	"	"	"	"
194	K13+H1.11.1+I2+E1.0 (0 psi)/7.6" cap, underbody, 1.25" gap	"	"	"	"	"	"	"
195	K13+H1.11.1+I2+E1.0 (20 psi)/Same as 194 with 20 psi air	"	"	"	"	"	"	"
196	K13+H1.11.1+I2+E1.0 (40 psi)/Same as 194 with 40 psi air	"	"	"	"	"	"	"
197	K13+H1.11.1+I2+E1.0 (150 psi)/Same as 194 with 150 psi air	"	"	"	"	"	"	"
198	K13+H1.11.1+I2+E4.0 (0 psi)/Same as 194 except blowing tube 2" aft	"	"	"	"	"	"	"
199	K13+H1.11.1+I2+E4.0 (40 psi)/Same as 198 with 40 psi air	"	"	"	"	"	"	"
200	K13+H1.11.1+I2+E4.0 (150 psi)/Same as 198 with 150 psi air	"	"	"	"	"	"	"
201	K13+H1.11.2+I2+E4.0 (150 psi)/Same as 200 except center support cap	"	"	"	"	"	"	"
202	K13+H1.11.2+I2/Baseline with I2 and no blowing tube	"	"	"	"	"	"	"
203	K13+H1.0+E5.0 (0 psi)/Bifurcated air duct baseline	"	"	"	"	"	"	"

TABLE 2 (CONTINUED)
LIST OF TEST RUNS
EVALUATION OF WAKE-ALTERING DEVICES

[illegible]

TABLE 3					
INDEX TO RAKE POSITIONS					
RUN NUMBER	TEST POINT	WATER LINE	MODEL STATION	BUTT LINE	LOCATION FIGURE
111	20	53.5	103.1	-7.25	1
	21	"	"	"	
	22	"	105.0	"	
	24	"	107.0	"	
	26	"	109.0	"	
	28	"	111.0	"	
	30	"	112.9	"	
	32	"	114.9	"	
	34	"	116.9	"	
	36	"	118.9	"	
112	2	48.9	107.3	-7.25	1
	4	50.8	"	"	
	6	52.7	103.3	"	
	8	54.5	"	"	
	10	56.2	"	"	
	12	57.2	"	"	
113	2	51.7	103.3	-3.25	1
	4	52.3	"	"	
	6	52.8	"	"	
	8	53.3	"	"	
	10	53.9	"	"	
	11	53.3	"	"	
114	2	44.5	103.0	-3.25	1
	4	46.4	"	"	
	6	48.2	"	"	
	8	50.0	"	"	
	10	51.9	"	"	
115	3	52.9	124.7	-3.25	1
	4	52.0	"	"	
	6	50.0	"	"	
	9	48.0	"	"	
	10	46.0	"	"	
	12	44.1	"	"	
	14	42.1	"	"	
	16	53.0	"	"	
	18	54.0	"	"	
	20	55.0	"	"	

TABLE 3 (CONTINUED)
INDEX TO RAKE POSITIONS

RUN NUMBER	TEST POINT	WATER LINE	MODEL STATION	BUTT LINE	LOCATION FIGURE
116	7	36.9	100.5	-17.5	1
117	2 4 6 8 10	37.6 " 37.3 " "	100.5 " 99.6 " "	-16.0 -14.0 -12.0 -10.0 - 8.0	1
118	2	37.6	100.5	- 6.0	1
119	2 5 8 9 14 16 20 25	37.3 " " " " " 51.5 52.3	99.6 " " " " " 102.5 101.7	+ 6.0 8 10 " 14 16 17.5 -17.5	1
121	3 4 6 8 10	62.9 53.5 50.1 46.0 42.1	129.0 " " " "	+ 5.7 " " " "	2
135	2 4 6 8 10 12 14	56.9 54.5 52.5 50.5 48.5 46.5 44.5	106.3 " " " " " "	- 5.7 " " " " " "	3
136	2 4 6 8 10 12 14 17 18 19	56.5 54.5 52.5 50.6 48.5 46.5 44.5 37.1 39.0 41.0	104.0 " " " " " " " " "	- 8.0 " " " " " " " " "	4

TABLE 3 (CONTINUED)
INDEX TO RAKE POSITIONS

RUN NUMBER	TEST POINT	WATER LINE	MODEL STATION	BUTT LINE	LOCATION FIGURE
137	3	38.7	98.4	- 8.0	5
	5	39.9	"	"	
	7	42.0	100.5	"	
	9	44.0	"	"	
	11	46.0	103.6	"	
	13	48.0	"	"	
	15	50.0	"	"	
	17	52.0	"	"	
	19	54.0	"	"	
138-41, 143	2	38.8	98.4	- 8.0	5
	3	40.0	"	"	
	4	42.0	100.5	"	
	5	44.0	"	"	
	6	46.0	103.6	"	
	7	48.0	"	"	
	8	50.0	"	"	
	9	52.0	"	"	
	10	54.0	"	"	
142	7	37.8	98.4	- 8.0	5
	8	"	"	"	
	9	40.2	"	"	
	10	42.0	100.5	"	
	11	44.0	"	"	
	12	46.0	103.6	"	
	13	48.0	"	"	
	14	50.0	"	"	
	15	52.0	"	"	
	16	54.0	"	"	
	17	56.8	"	"	

TABLE 3 (CONTINUED)
INDEX TO RAKE POSITIONS

RUN NUMBER	TEST POINT	WATER LINE	MODEL STATION	BUTT LINE	LOCATION FIGURE
149-151	2	38.8	98.5	- 8.0	5
	3	40.0	"	"	
	4	42.0	100.6	"	
	5	44.0	"	"	
	6	46.0	103.5	"	
	7	48.0	"	"	
	8	50.0	"	"	
	9	52.0	"	"	
	10	54.0	"	"	
152-6, 158	2	42.9	97.9	0.0	6
161-4, 166	3	44.9	"	"	
167, 169-71	4	46.9	100.6	"	
175, 177-9	5	48.9	"	"	
180, 182, 184	6	50.9	104.6	"	
186-8, 190	7	52.9	"	"	
191, 193, 194	8	54.9	"	"	
196, 198, 201	9	56.9	"	"	
204, 207, 208					
211					
159	1	54.9	104.6	0.0	6
	2	52.9	"	"	
	3	50.7	"	"	
	4	48.6	100.6	"	
	5	46.7	"	"	
160, 203	5	42.9	97.9	0.0	6
	6	44.9	"	"	
	7	46.9	100.6	"	
	8	48.9	"	"	
	9	50.9	104.6	"	
	10	52.9	"	"	
	11	54.9	"	"	
165	3	44.9	97.9	0.0	6
	4	42.9	"	"	
	5	46.9	100.6	"	
	6	48.9	"	"	
	7	50.9	104.6	"	
	8	52.9	"	"	

TABLE 3 (CONTINUED)
INDEX TO RAKE POSITIONS

RUN NUMBER	TEST POINT	WATER LINE	MODEL STATION	BUTT LINE	LOCATION FIGURE
168, 183	4	42.9	97.9	0.0	6
	5	44.9	"	"	
	6	46.9	100.6	"	
	7	48.9	"	"	
	8	50.9	104.6	"	
	9	52.9	"	"	
	10	54.9	"	"	
172	3	42.9	97.9	0.0	6
	4	44.9	"	"	
	6	44.9	"	"	
	7	46.9	100.6	"	
	8	48.9	"	"	
	9	50.9	104.6	"	
	10	52.9	"	"	
173, 174, 176 185, 195, 197 199, 200, 205 210	1	42.9	97.9	0.0	6
	2	44.9	"	"	
	3	46.9	100.6	"	
	4	48.9	"	"	
	5	50.9	104.6	"	
	6	52.9	"	"	
	7	54.9	"	"	
181	2	42.9	97.9	0.0	6
	3	44.9	"	"	
	4	46.9	100.6	"	
	5	48.9	"	"	
	6	50.9	104.6	"	
	7	52.9	"	"	
	9	54.9	"	"	
	10	"	"	"	
	11	"	"	"	
	12	"	"	"	
	13	42.9	97.9	"	

TABLE 3 (CONTINUED)

INDEX TO RAKE POSITIONS

[illegible]

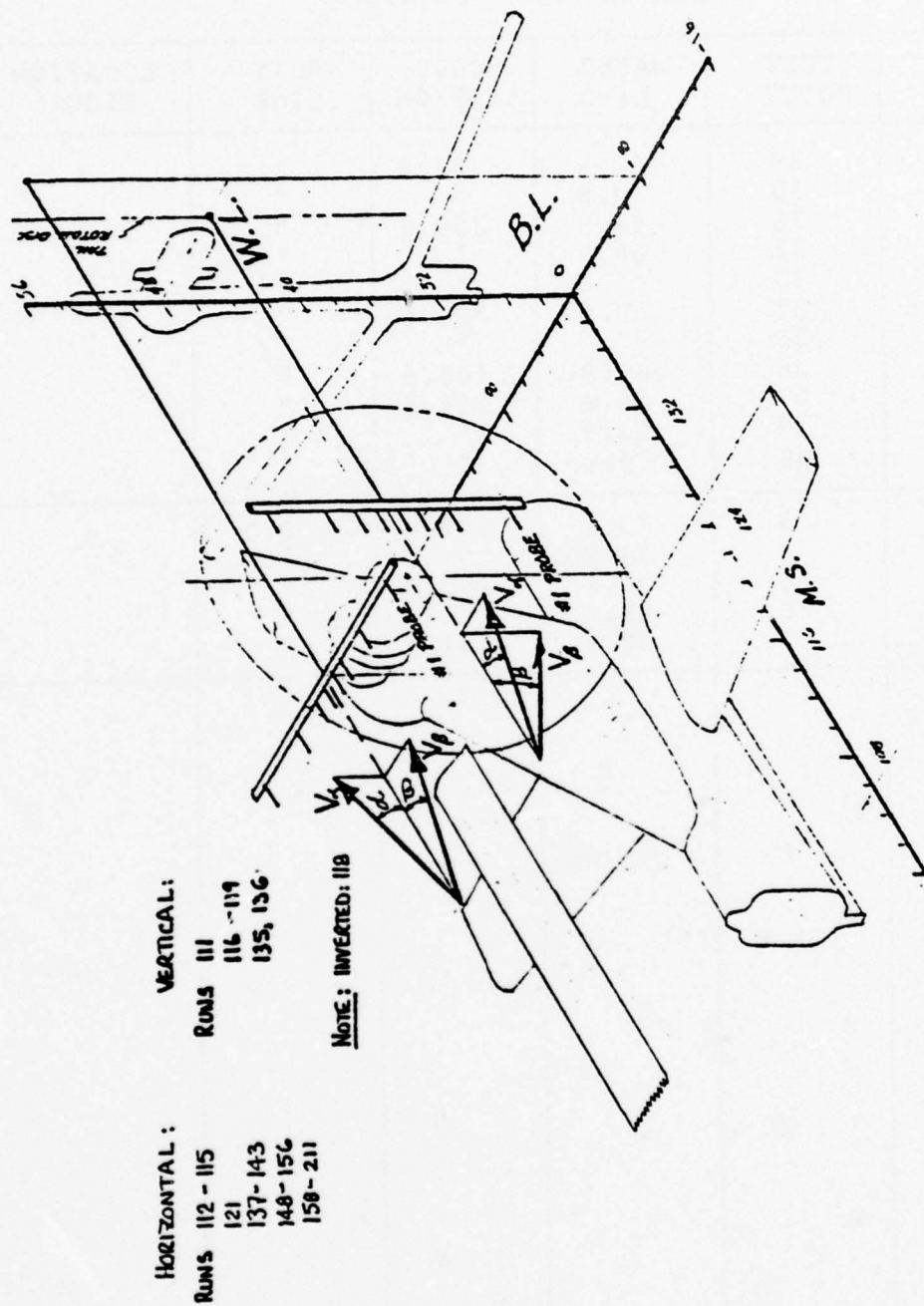


FIGURE 1 - RAKE ORIENTATION DIAGRAM

RUN 121

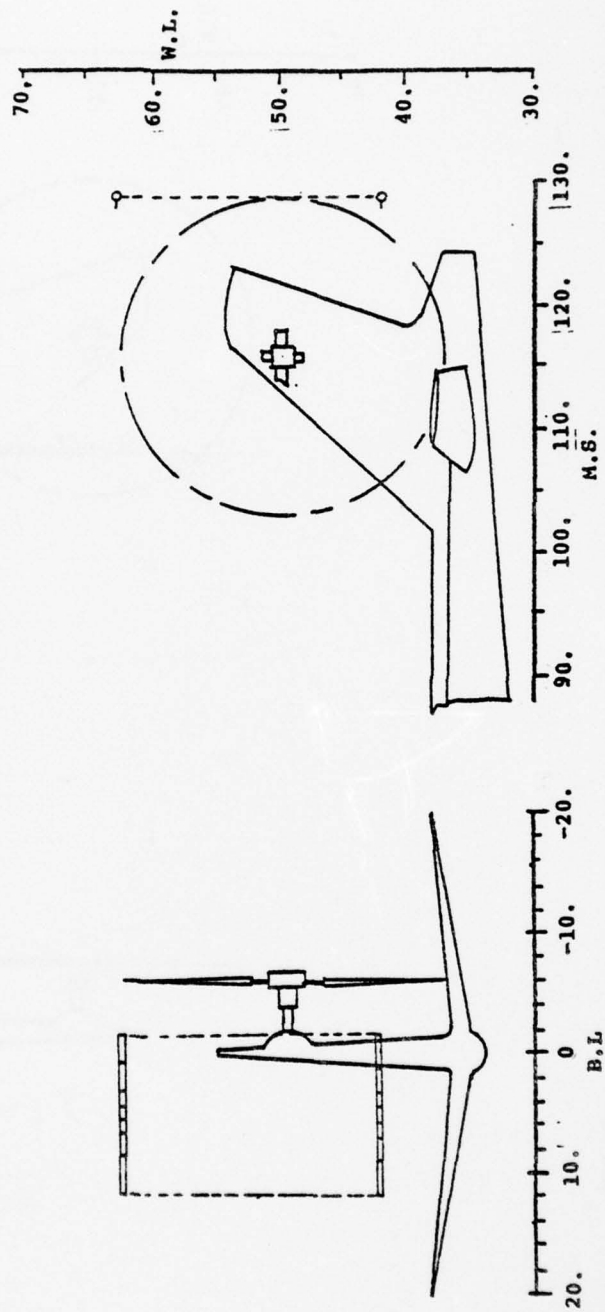


FIGURE 2 -HOT FILM RAKE LOCATIONS

RUN 135

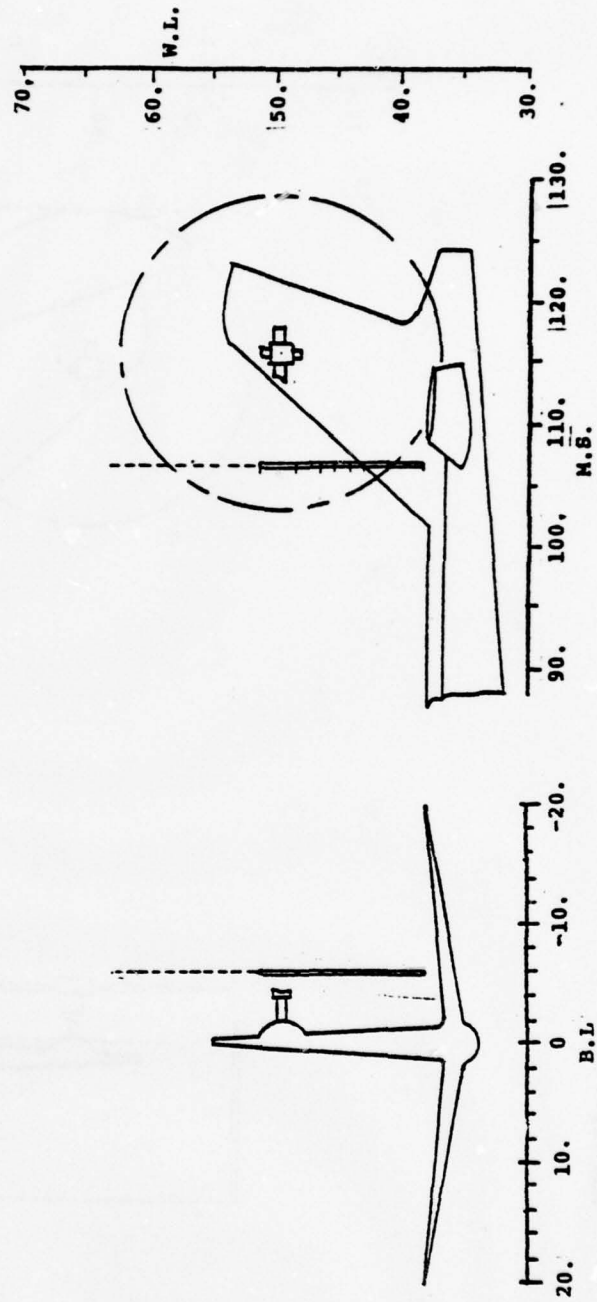


FIGURE 3 -HOT FILM RAKE LOCATIONS

RUN 136

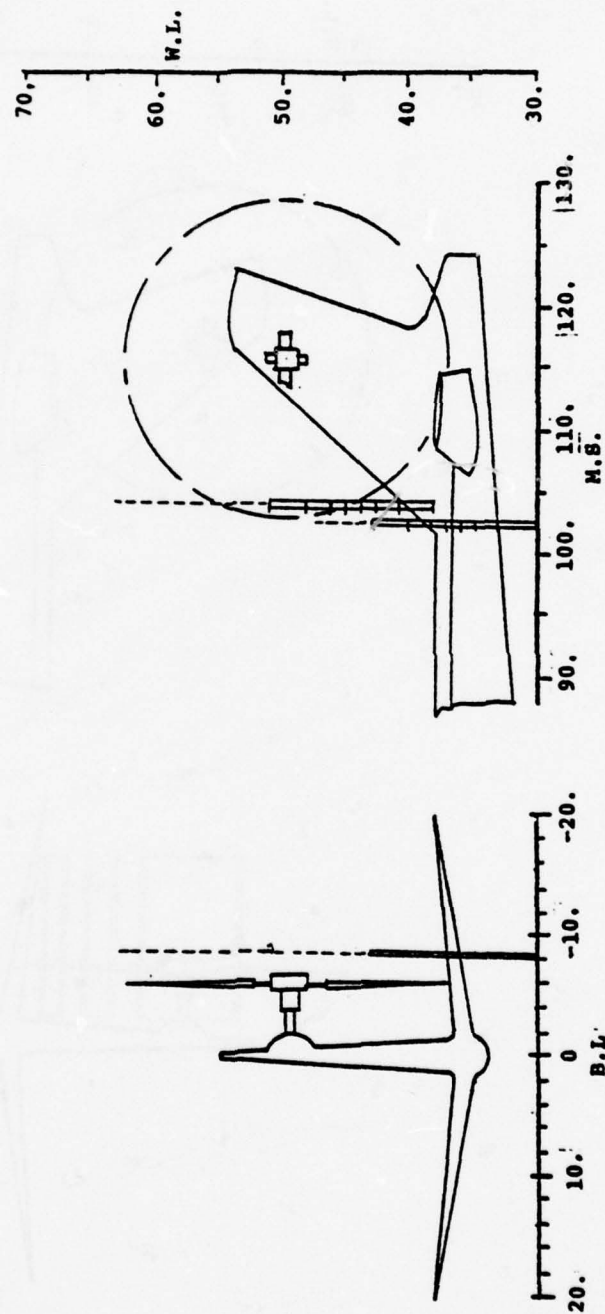


FIGURE 4 -HOT FILM RAKE LOCATIONS

RUN 137, 138, 139, 140, 141, 142,
143, 148, 149, 150, 151

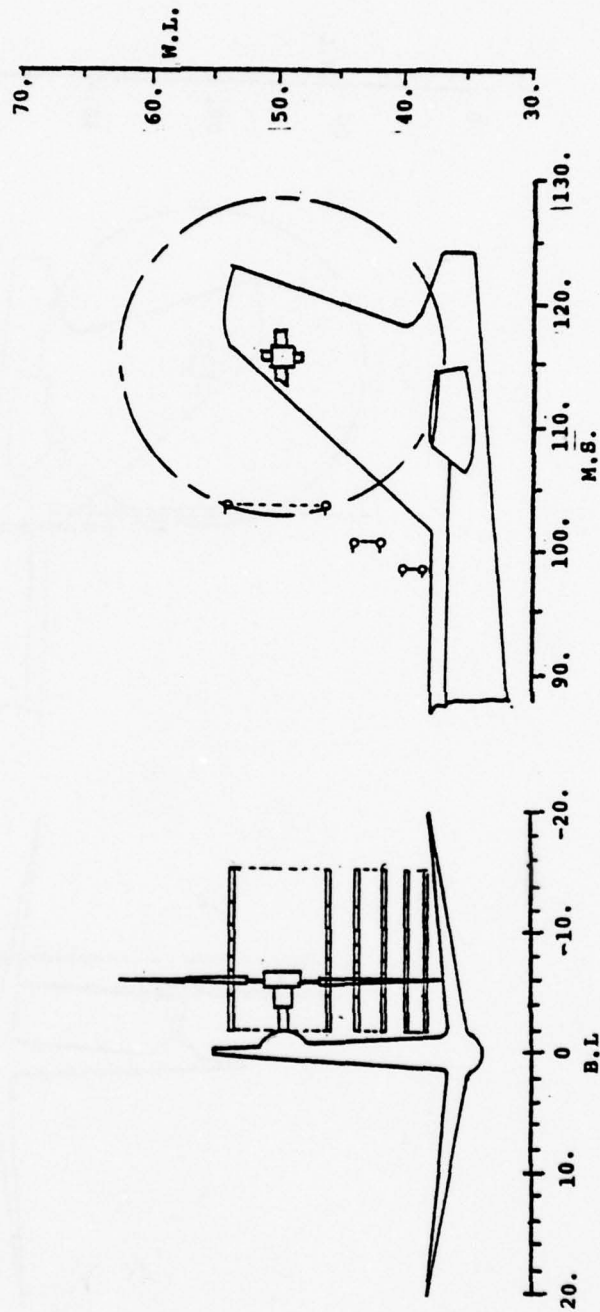


FIGURE 5 -HOT FILM RAKE LOCATIONS

RUN 152-156, 158-211

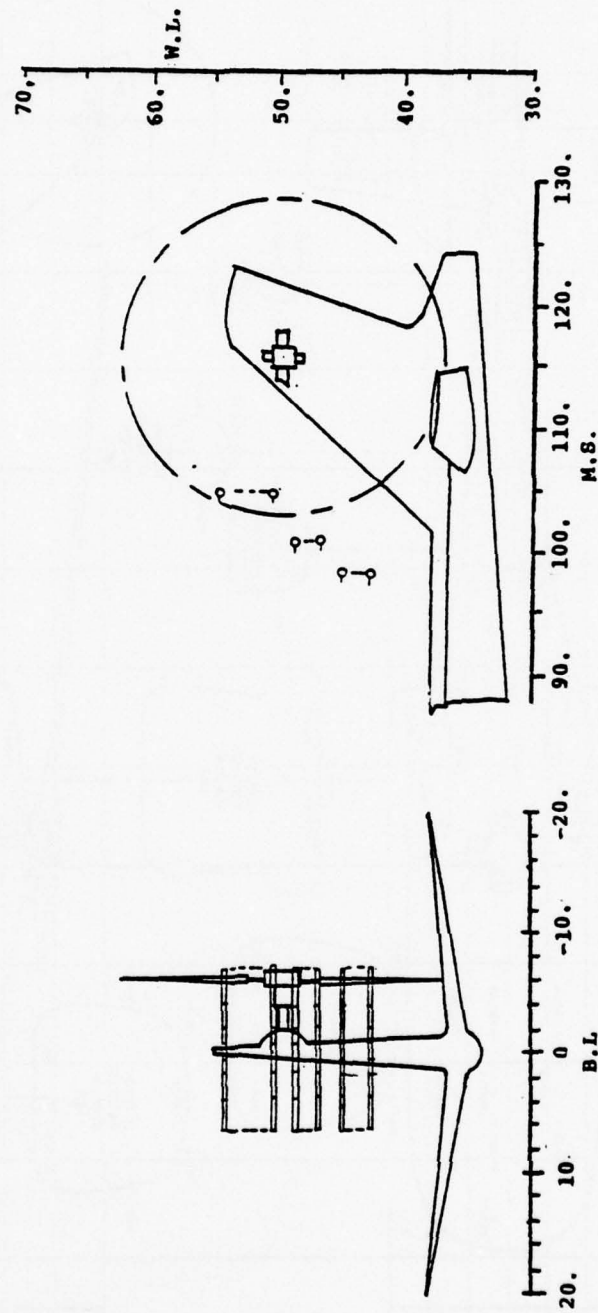


FIGURE 6 -HOT FILM RAKE LOCATIONS

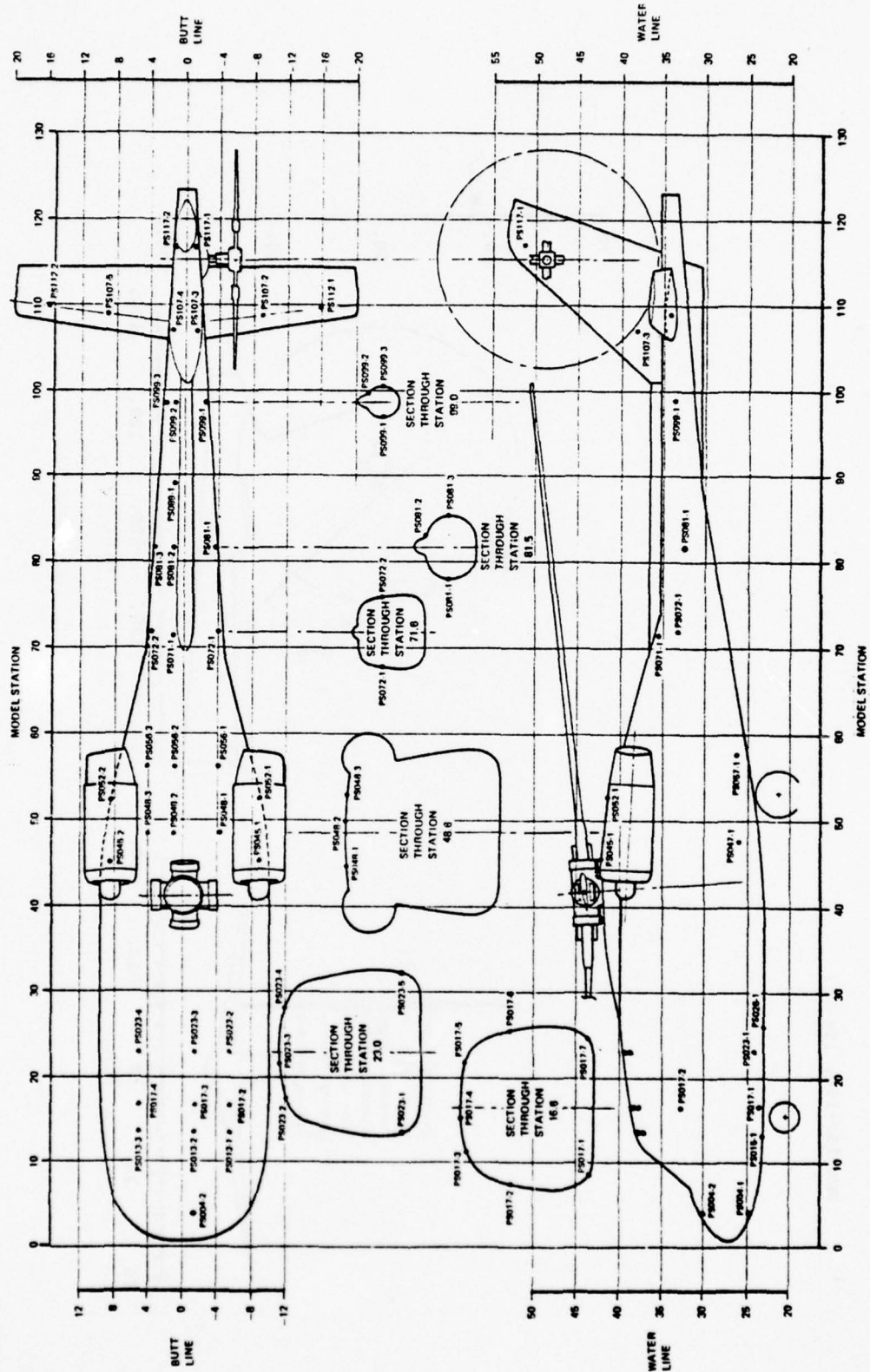


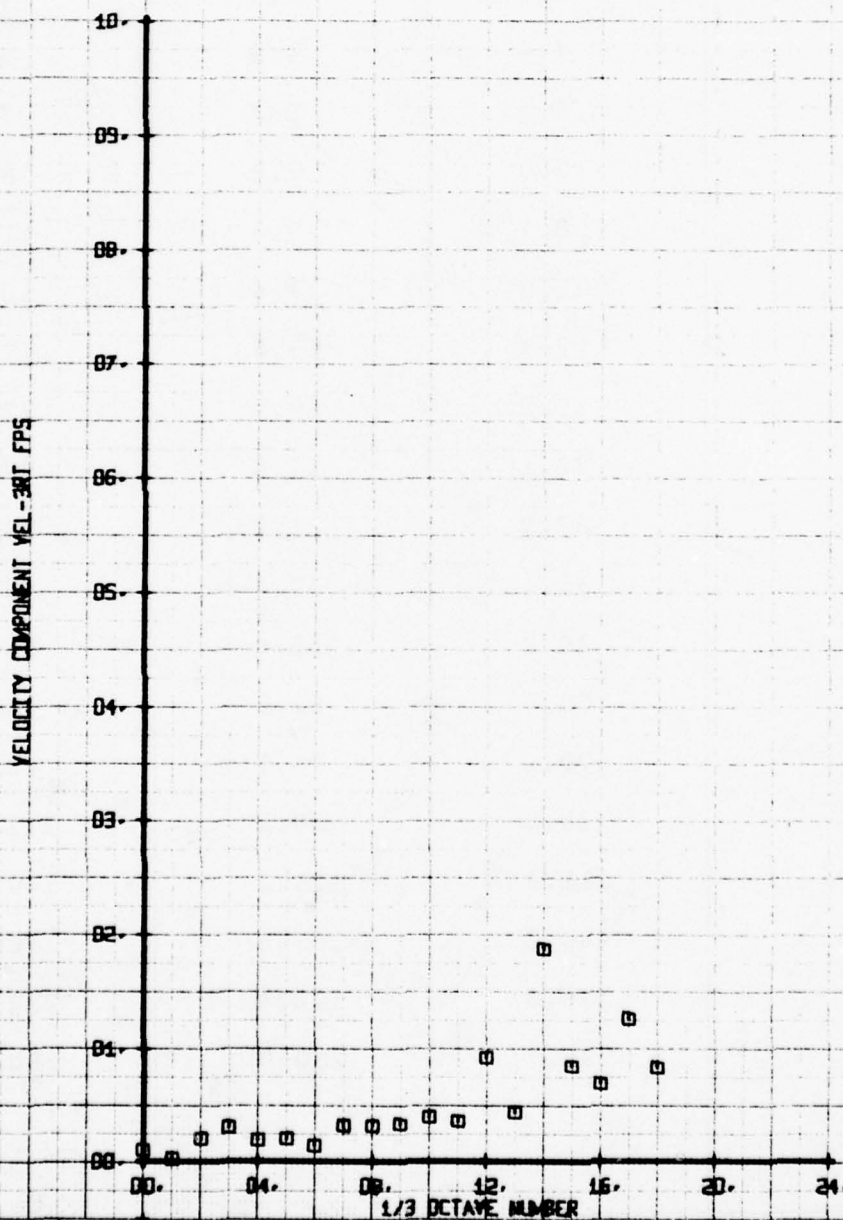
FIGURE 7 -1/4.85 SCALE MODEL GEOMETRY AND SURFACE PRESSURE TRANSDUCER LOCATIONS

TABLE 4
1/3 OCTAVE BAND IDENTIFICATION

BAND NUMBER	BAND WIDTH - Hz		
	MINIMUM	CENTER	MAXIMUM
0	3.5	3.4	4.4
1	4.4	4.9	5.5
2	5.5	6.2	7.0
3	7.0	7.8	8.7
4	8.7	9.8	11.0
5	11.0	12.4	13.9
6	13.4	15.6	17.5
7	17.5	19.7	22.1
8	22.1	24.8	27.8
9	27.8	31.25	35.1
10	35.1	39.4	44.2
11	44.2	49.6	55.7
12	55.7	62.5	70.2
13	70.2	78.7	88.9
14	88.9	99.2	111.4
15	111.4	125.0	140.3
16	140.3	157.5	176.8
17	176.8	198.4	222.7
18	222.7	250.0	280.6

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE AT I/R C.L.
 RUN 11.1 TP 20

SYM	CH	PARAMETER
□	71	VEL-3RT



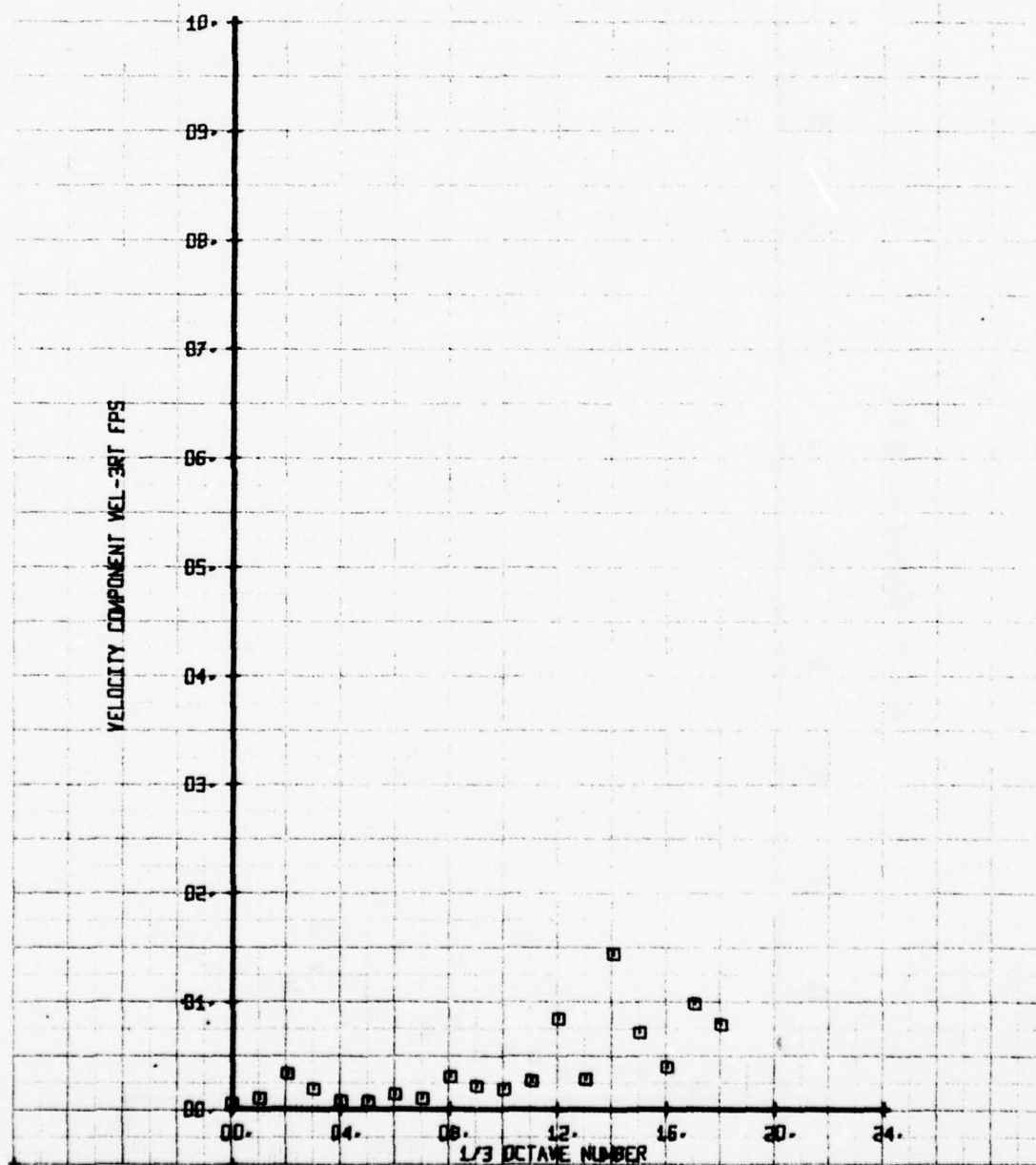
ET 1
 WT 169

32

SET 1
 BVWT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRANSVERSE AT 1/4 R C-L.
 RUN 111 TP 21

LEGEND
 SYM CH PARAMETER
 □ 71 VEL-3RT

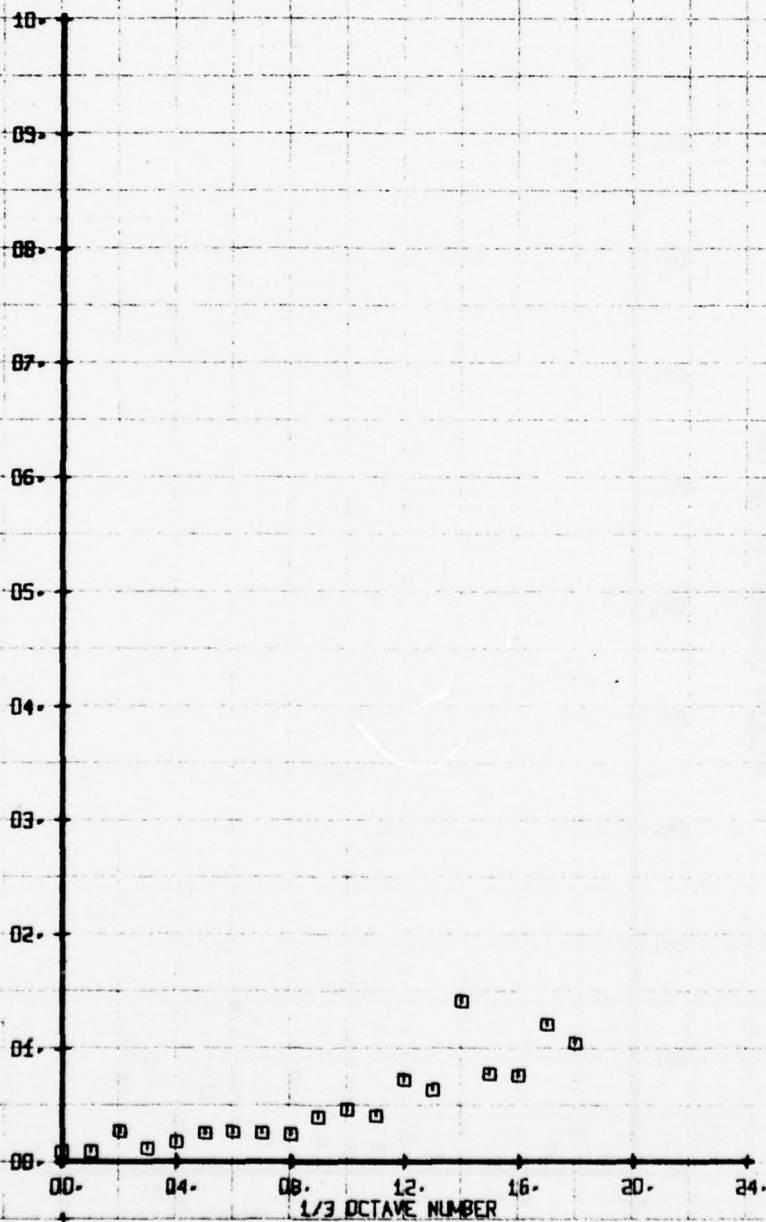


IET 1
 WT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE AT I/R C.J.
 RUN 111 TP 22

SYM	CH	PARAMETER
□	71	VEL-3RT

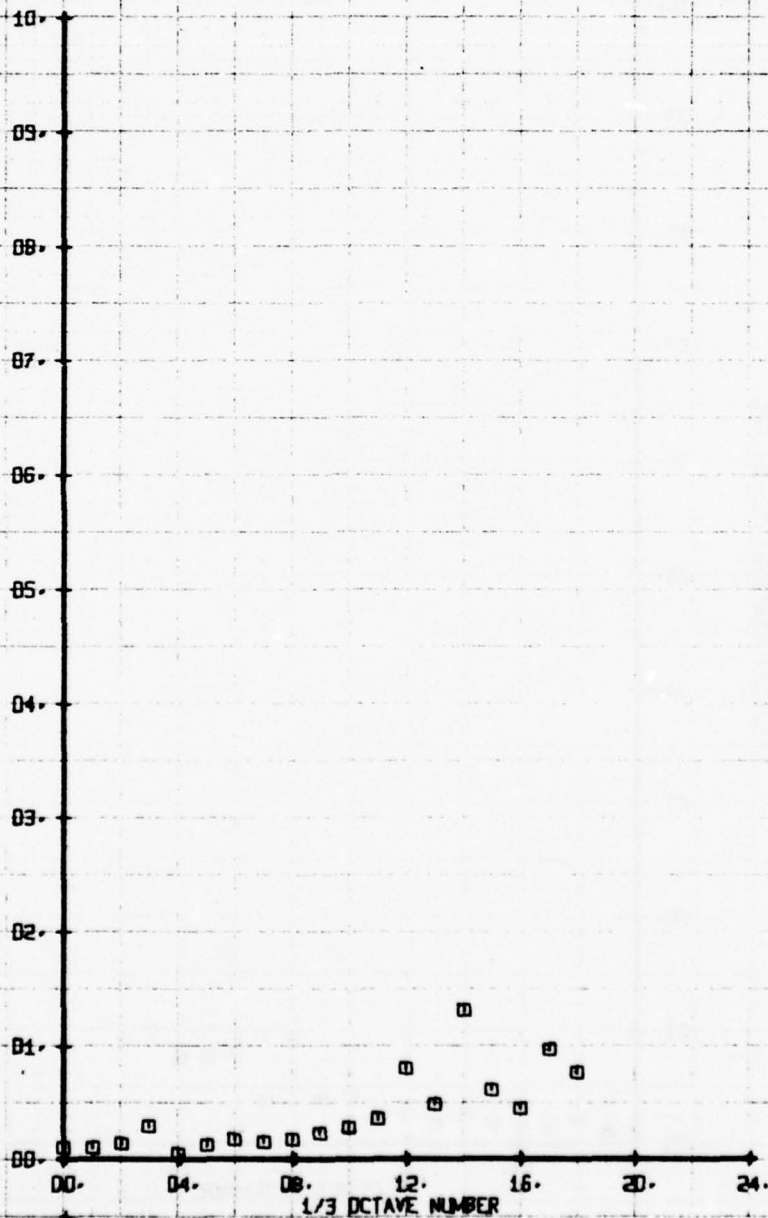
VELOCITY COMPONENT VEL-3RT FPS



HOT FILM WARE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE AT 1/R C.L.
 RUN 111 TP 24

SYM	CH	PARAMETER
□	71	VEL-3RT

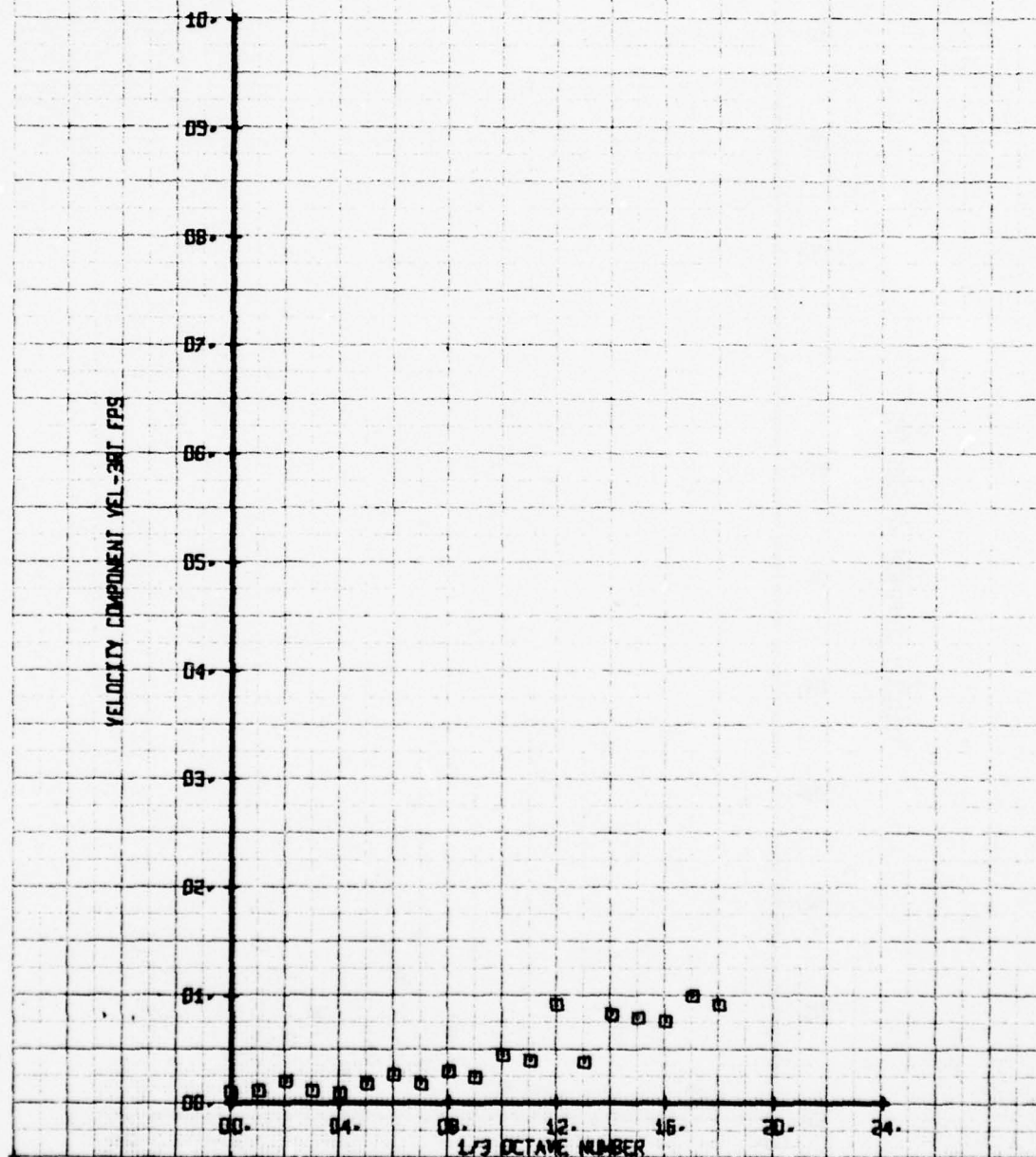
VELOCITY COMPONENT VEL-3RT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE AT 1/4 C.L.
 RUN 111 TP 26

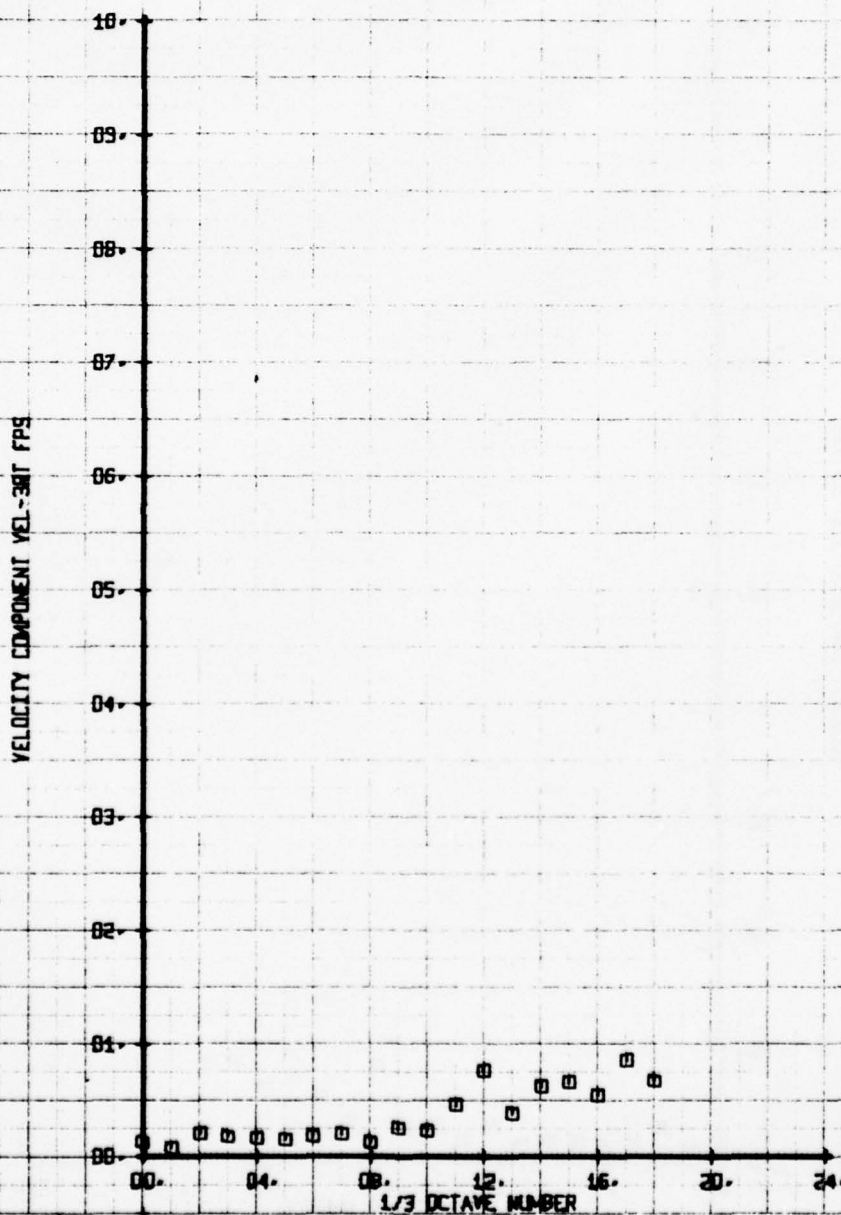
LEGEND		
SYM	CH	PARAMETER
□	71	VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS



NOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE AT 1/R C.L.
 RUN 111 TP. 28

LEGEND
 SYM 11 PARAMETER
 0 71 VEL-3RT



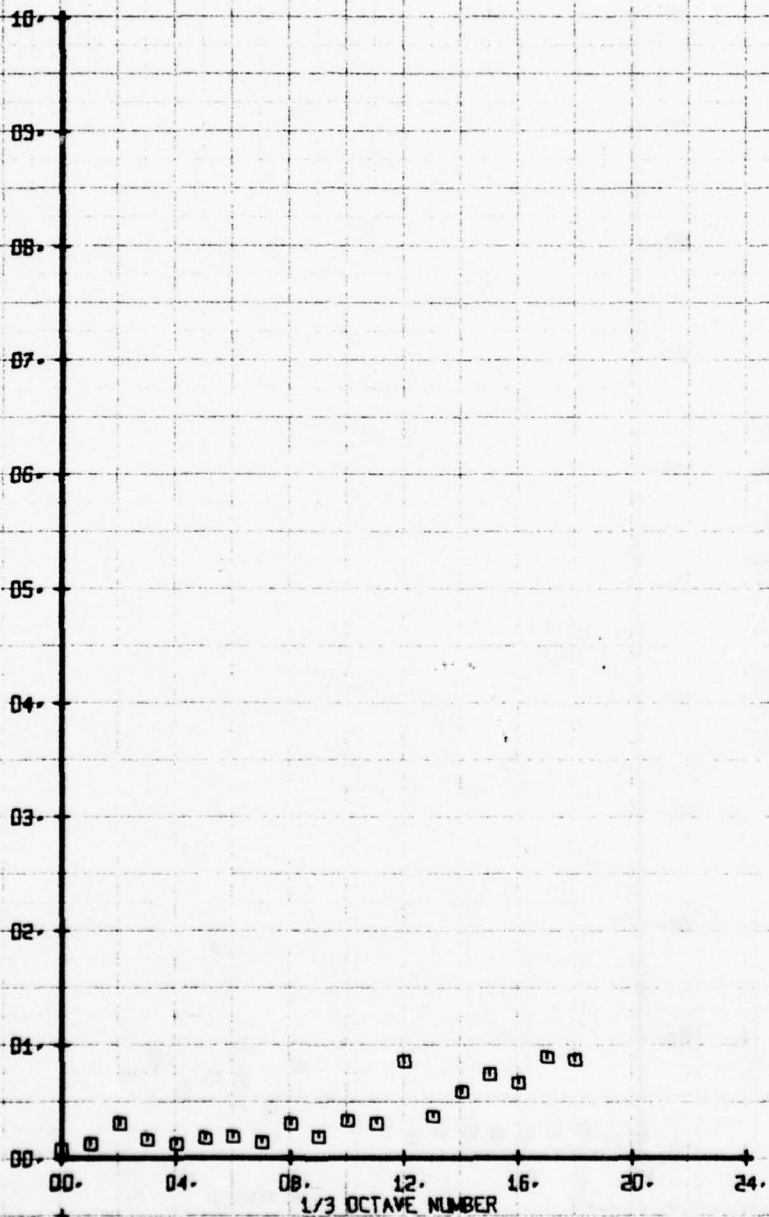
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CORRECTION TRAVERSE AT T/R C.L.
RUN 141 TP 30

SYM
□

CH
71

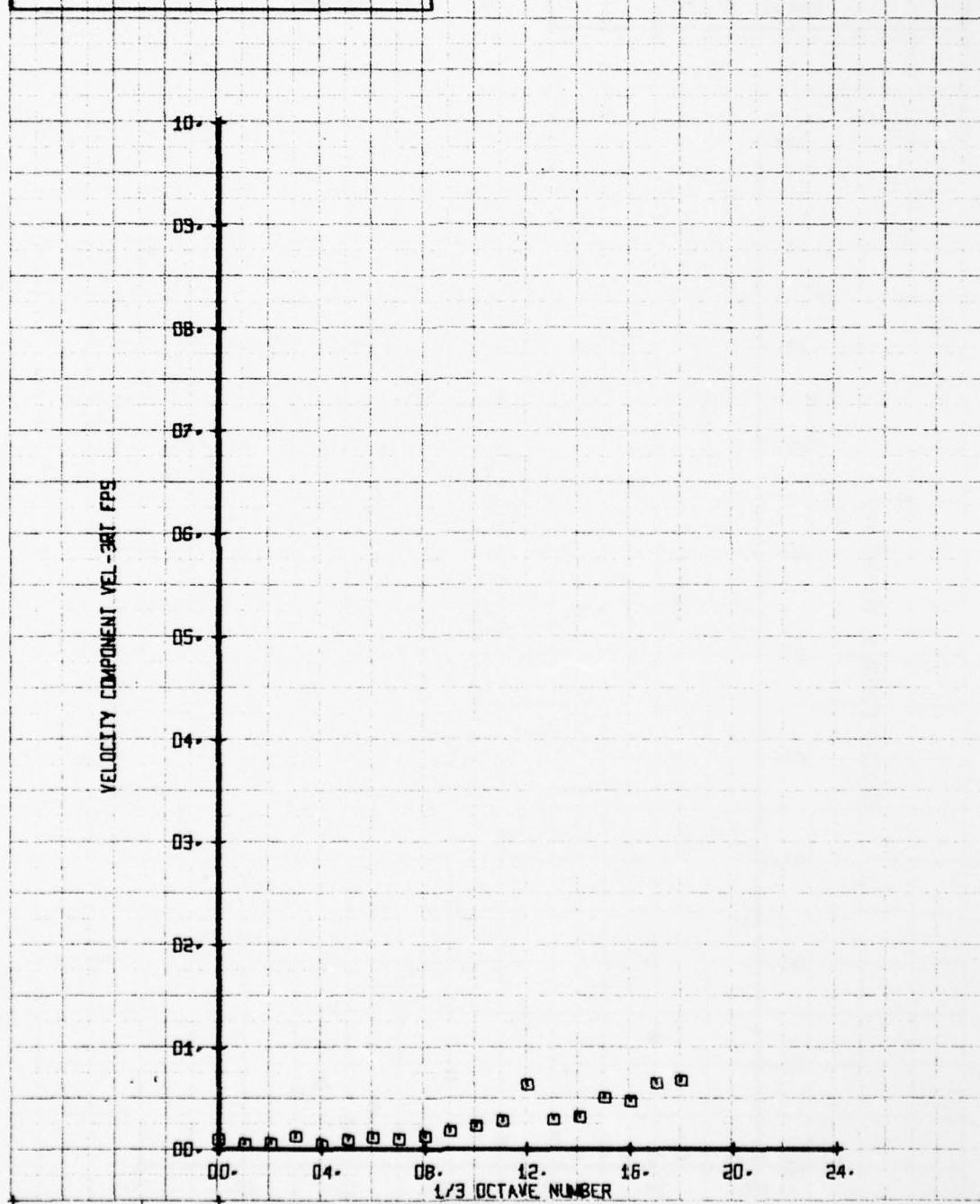
LEGEND
PARAMETER
VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS



NOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE AT T/R C.L.
 RUN 111 TP 32

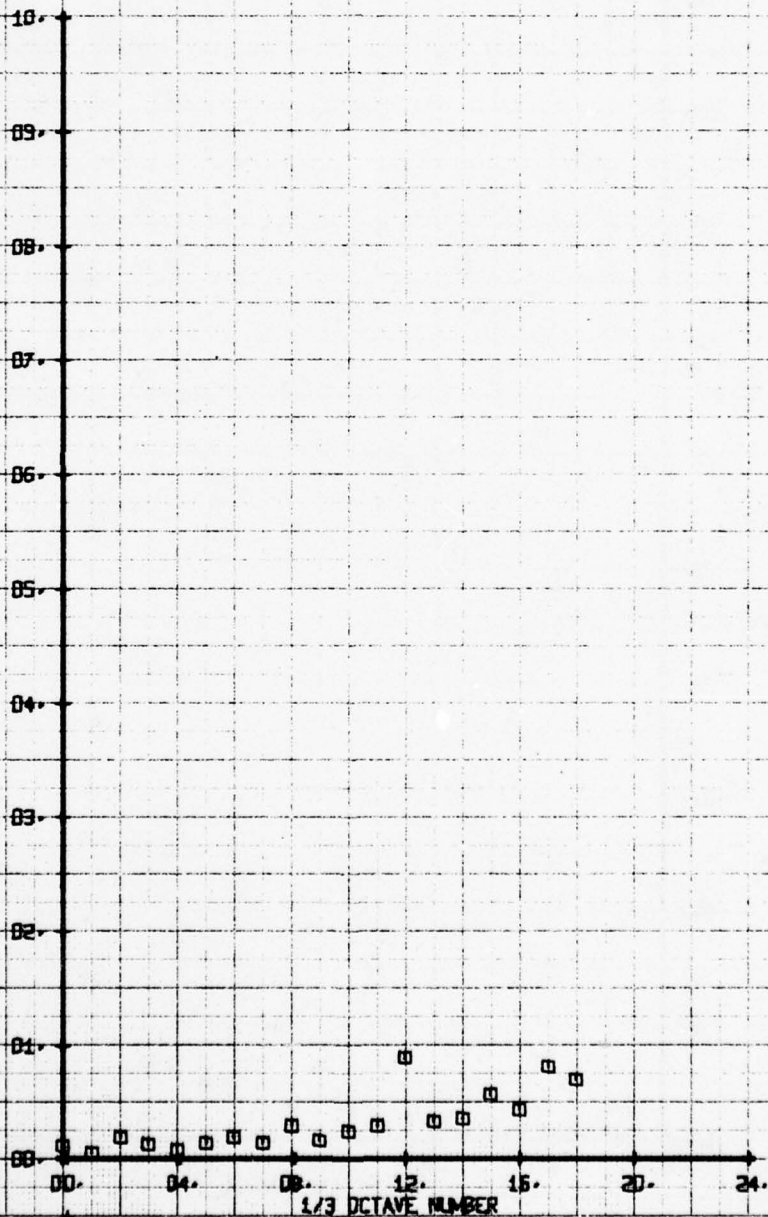
LEGEND
 SYM CH PARAMETER
 □ 71 VEL-3RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE AT 1/4 C.L.
 RUN 111 TP 34

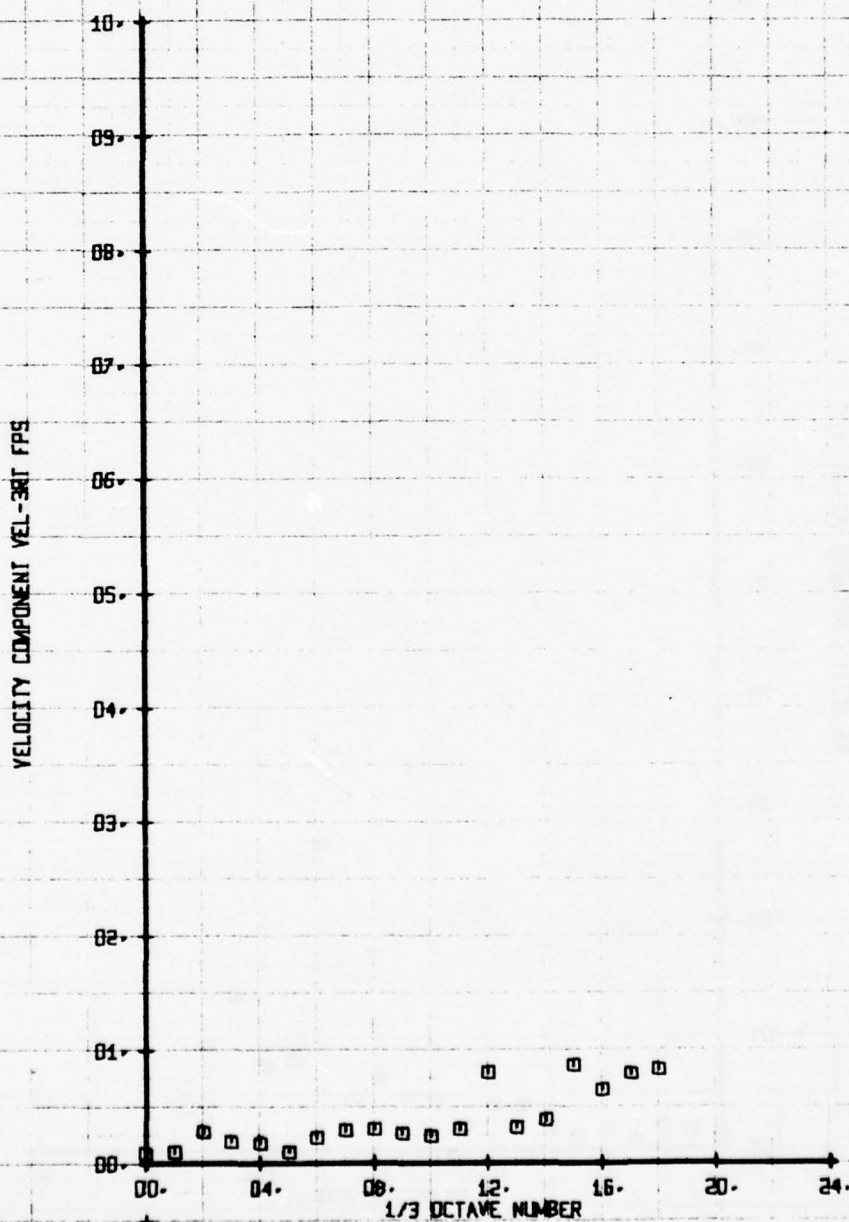
SYM	CH	PARAMETER
□	71	VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS



HOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE AT T/R C.L.
 RUN 111 TP 36

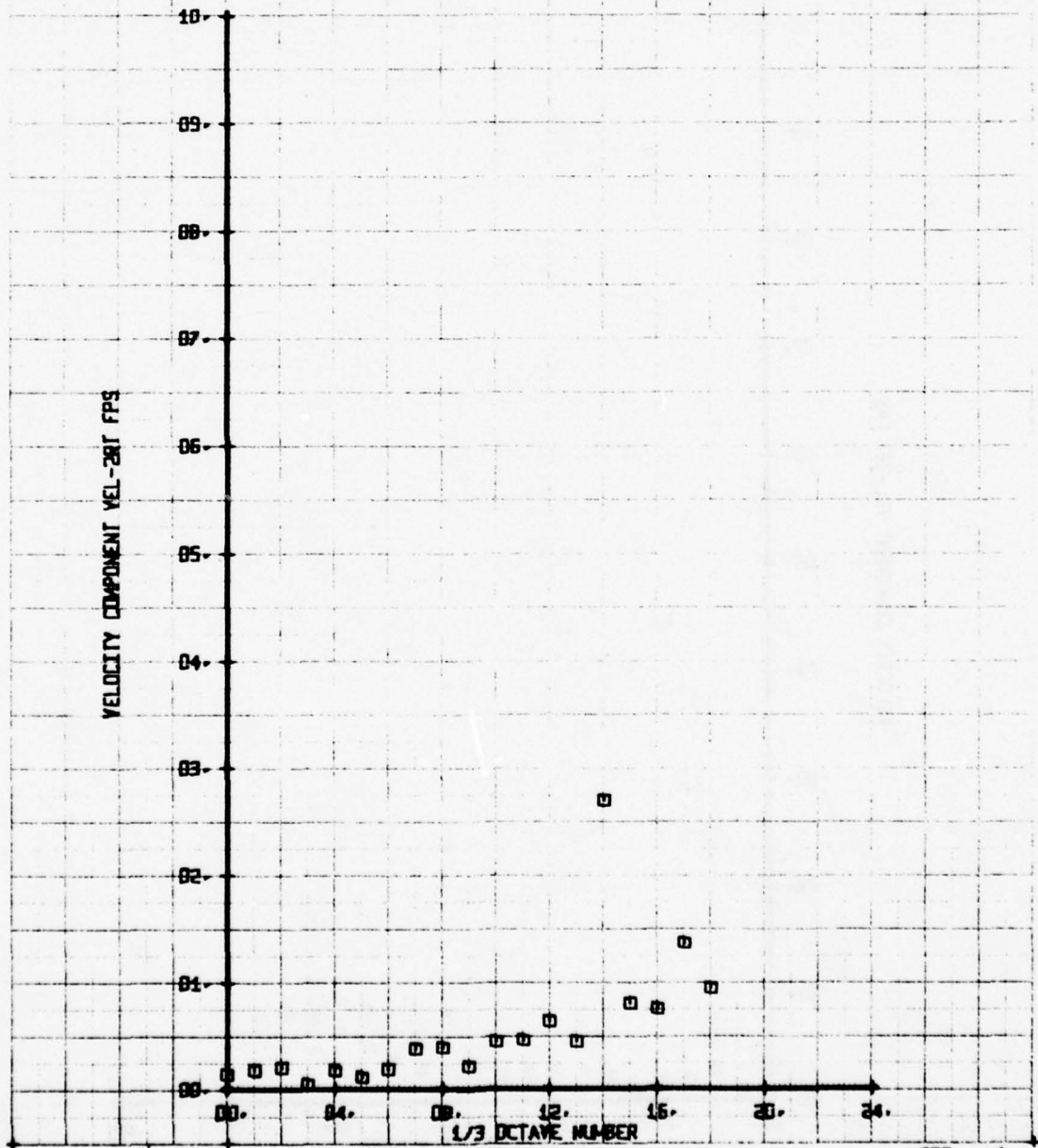
SYM	CH	LEGEND	PARAMETER
□	71		VEL-3RT



NOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE AT T/R C.L.
 RUN 111 TP 20

SYM	CH	PARAMETER
0	75	VEL-2RT

VELOCITY COMPONENT VEL-2RT FPS



SET 1
 WT 169

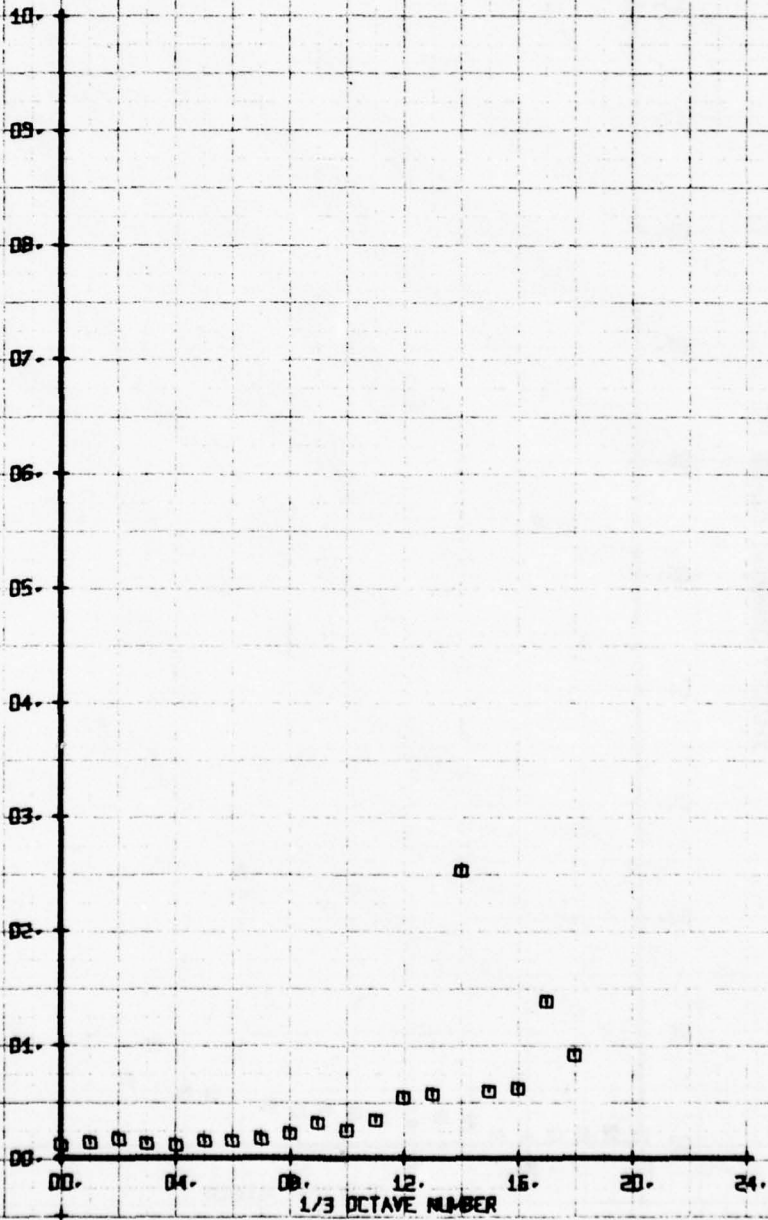
42

SET 1
 BWT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE AT 1/8 C.L.
 RUN 111 TP 21

SYM	CH	PARAMETER
□	75	VEL-2RT

VELOCITY COMPONENT VEL-2RT FPS

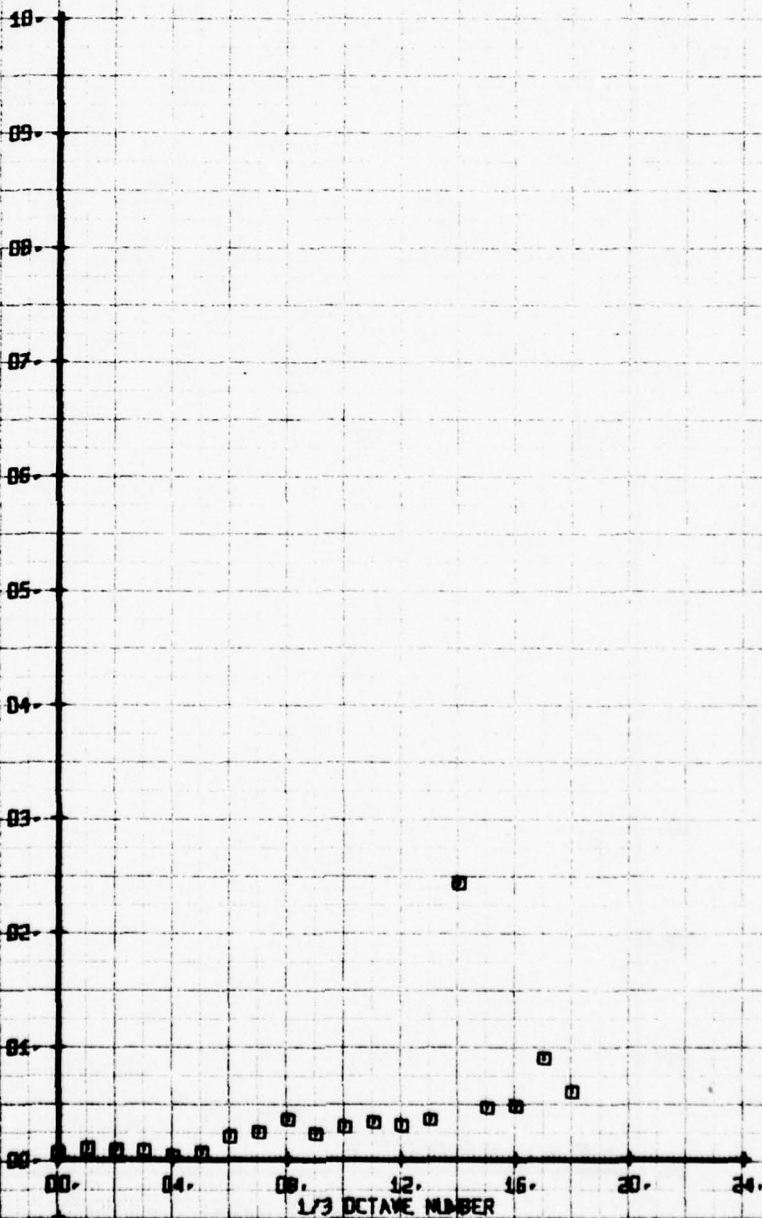


ET 1
 WT 169

NOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE AT 1/R C-L.
 RUN 111 TP 22

LEGEND		
SYM	CH	PARAMETER
□	75	VEL-2RT

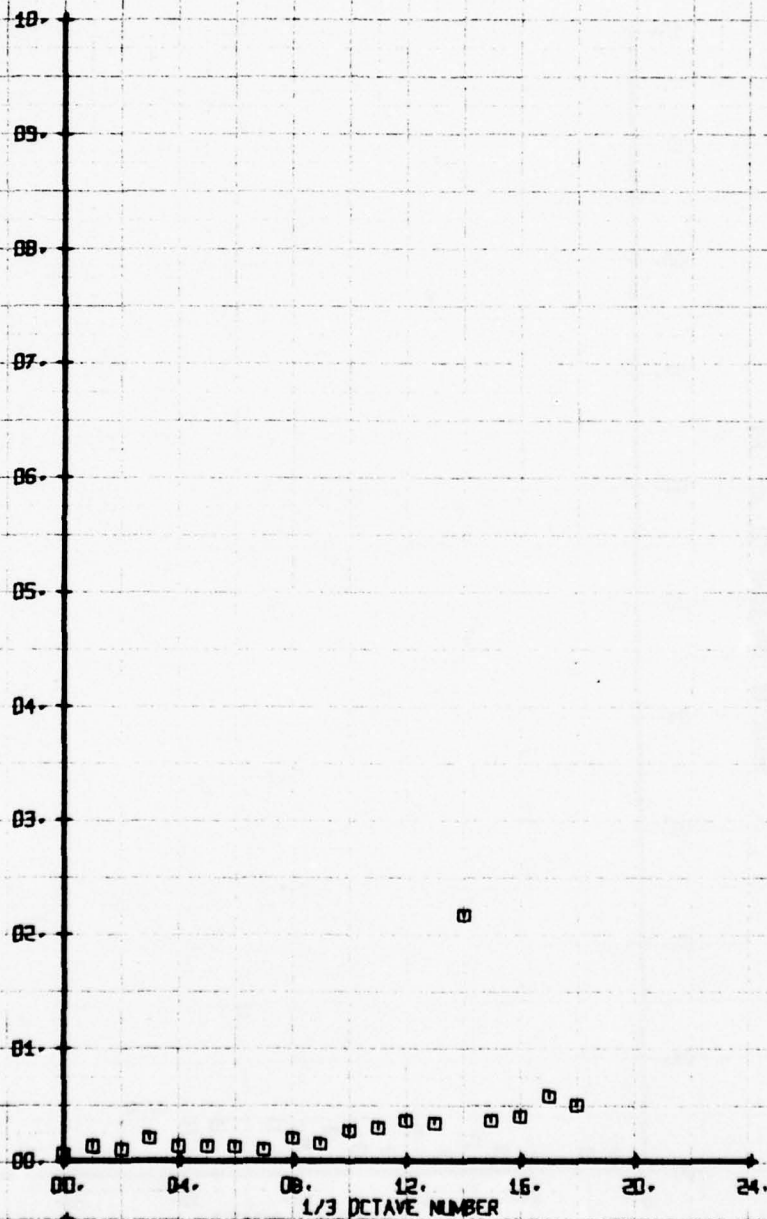
VELOCITY COMPONENT VEL-2RT FPS



HDT FILM WAVE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE AT 1/R C.L.
RUN 111 TP 24

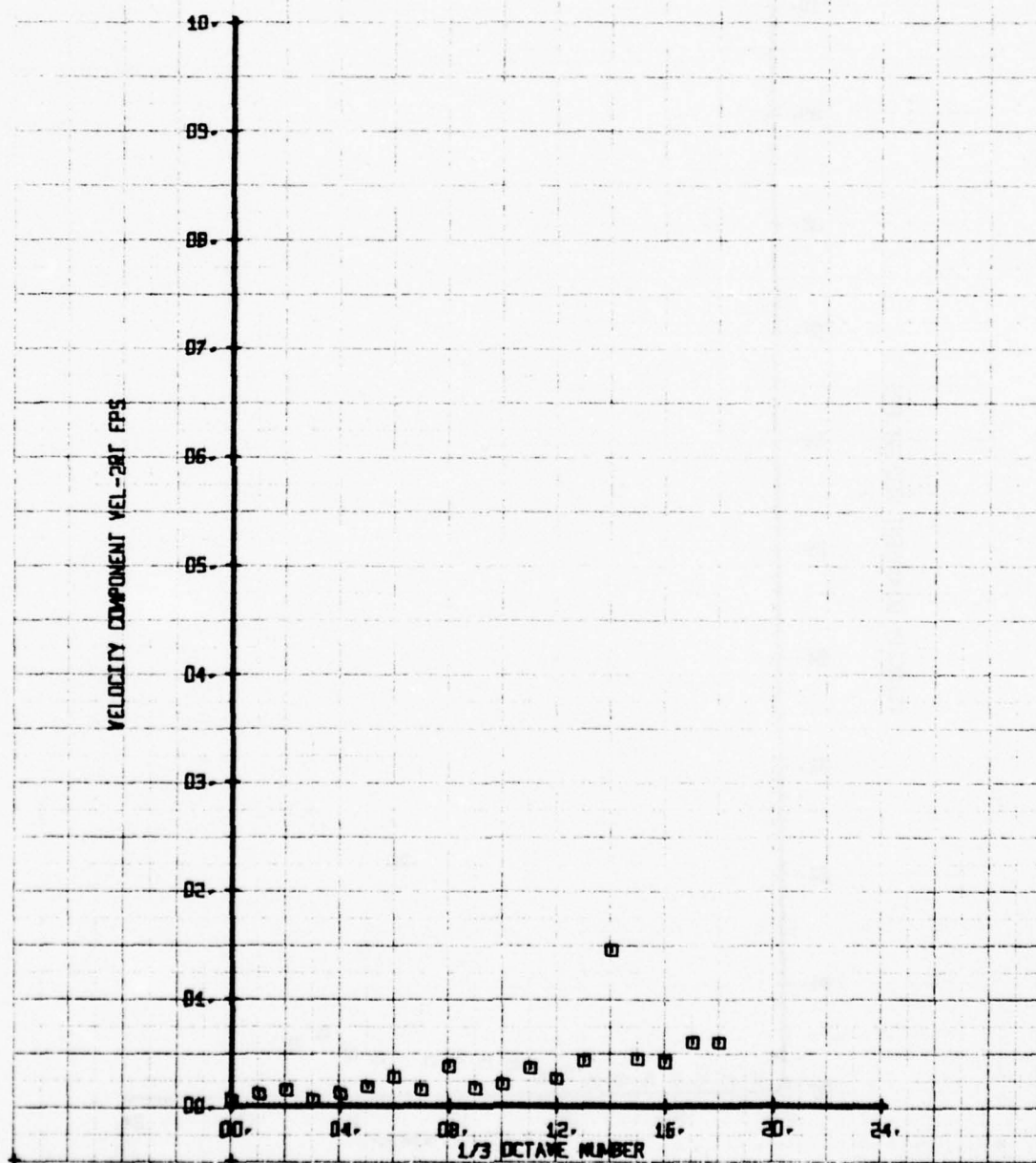
SYM	CH	PARAMETER
□	75	VEL-2RT

VELOCITY COMPONENT VEL-2RT FPS



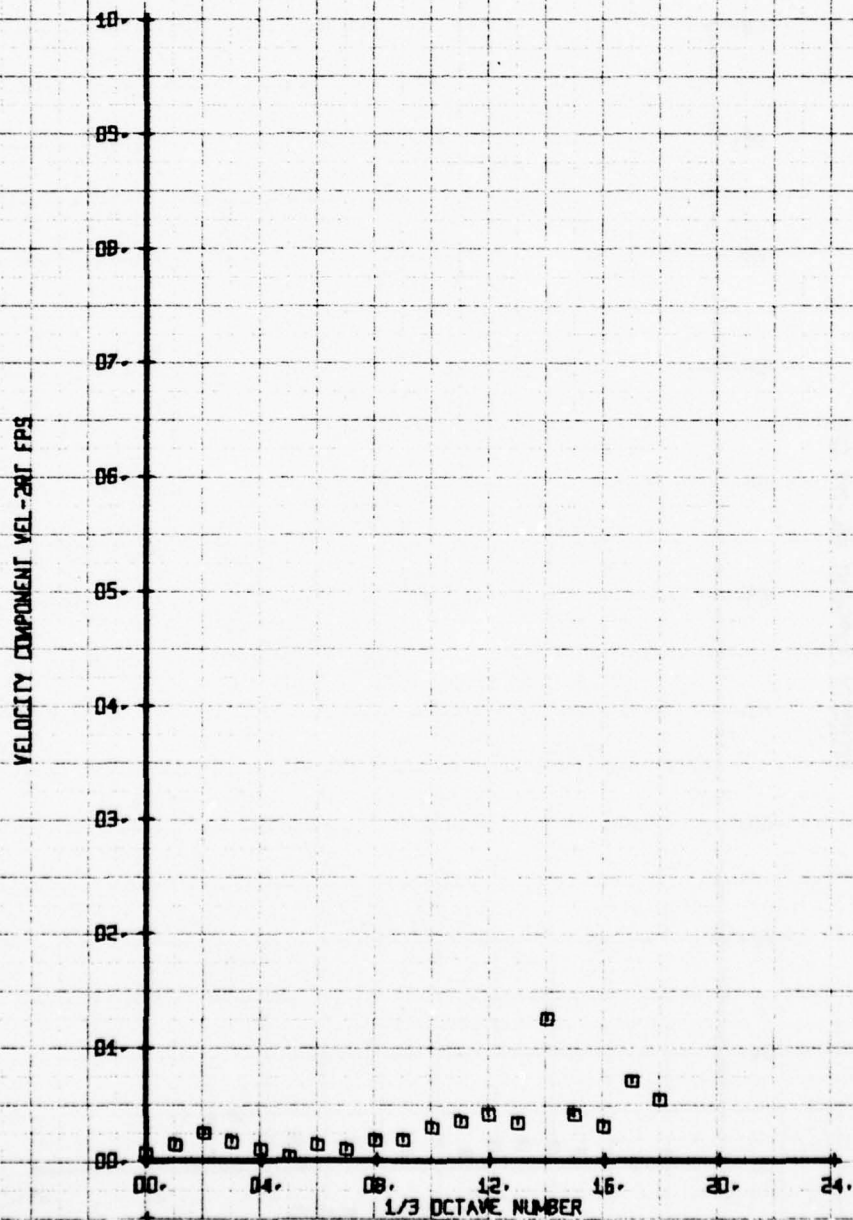
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE AT T/R C-L.
 RUN 111 TP 26

SYM	CH	PARAMETER
□	75	VEL-2RT



HOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE AT 1/8 C.L.
 RUN 111 TP 2B

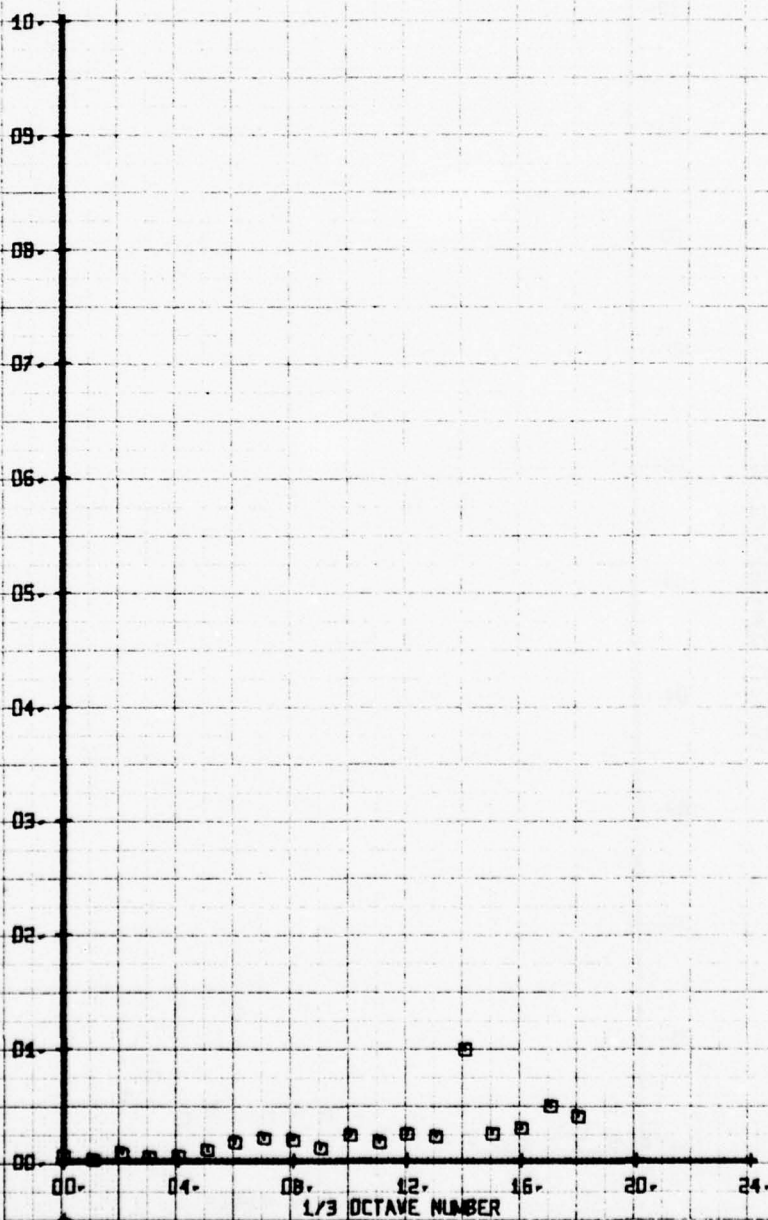
SYM	CH	LEGEND
□	75	PARAMETER VEL-2RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE AT T/R C-L.
RUN 111 TP 30

SYM	CH	PARAMETER
□	75	VEL-2RT

VELOCITY COMPONENT VEL-2RT FPS



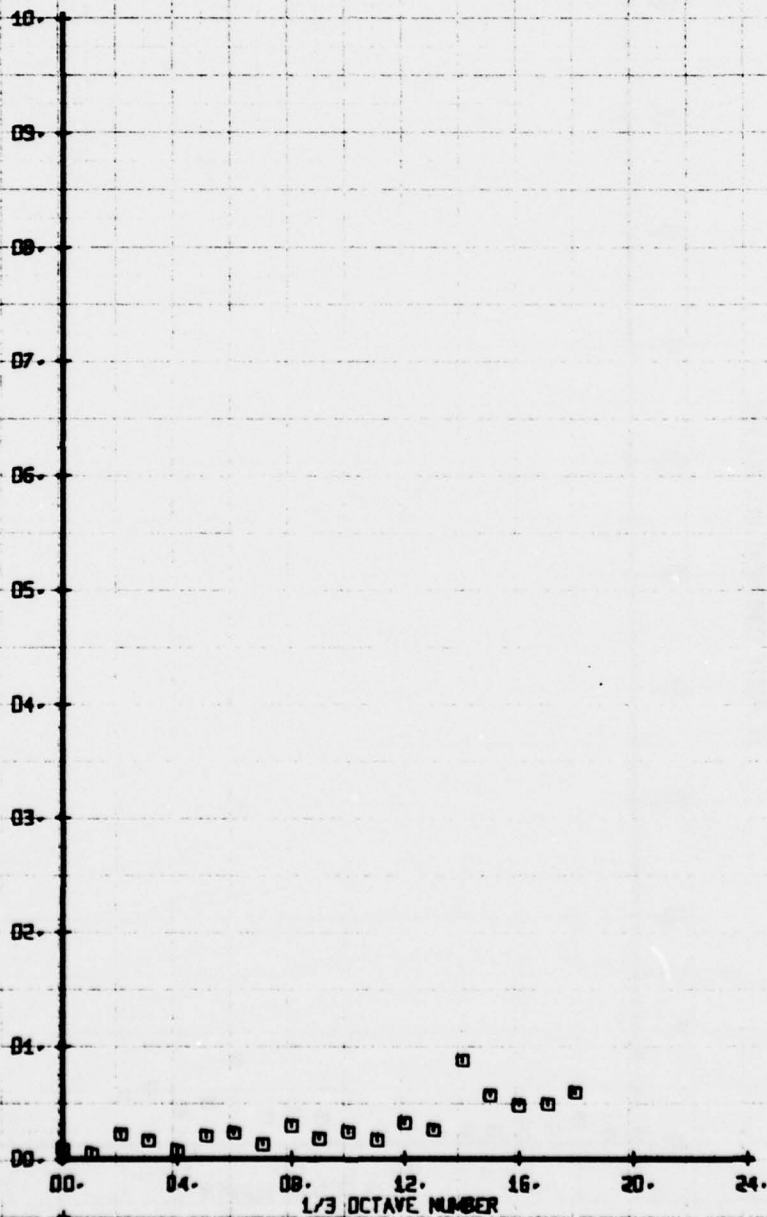
NOT FIUM WAVE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE AT T/R C.L.

RUN 111 TP 32

SYM
□

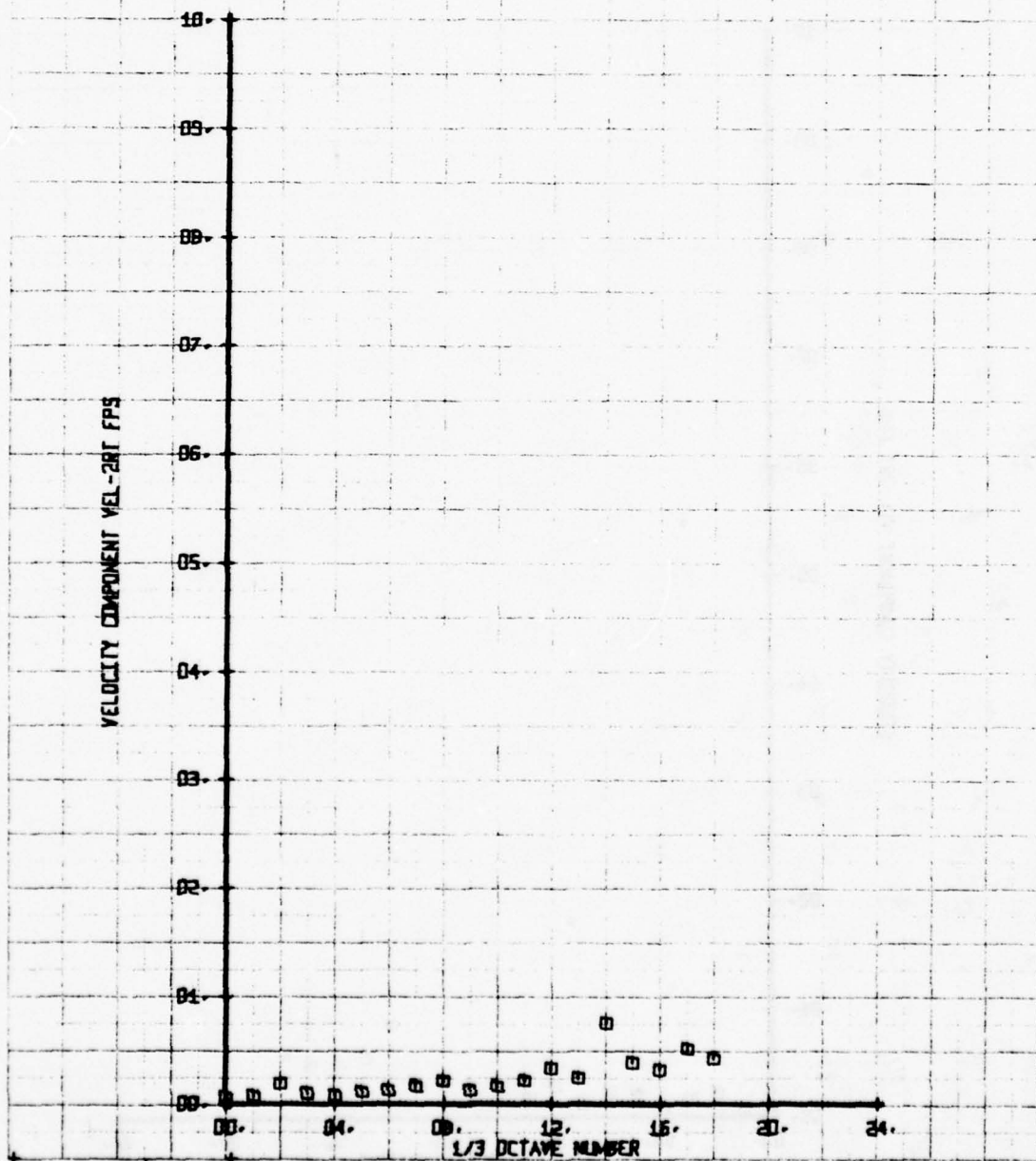
LEGEND
CH 75
PARAMETER
VEL-2RT

VELOCITY COMPONENT VEL-2RT FPS



NOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE AT T/R C-L.
 RUN 111 TP 34

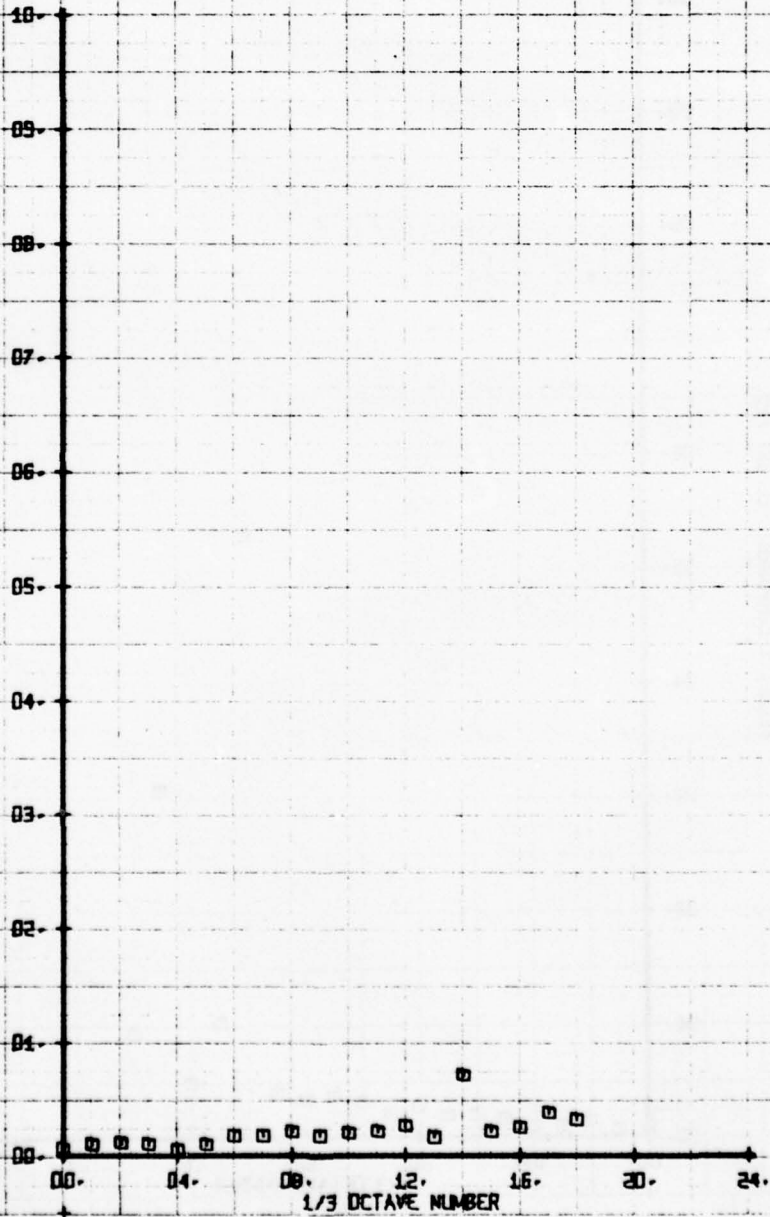
SYM	CH	PARAMETER
□	75	VEL-2RT



NOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONTIG. TRAVERSE AT T/R C.L.
 RUN 111 TP 36

LEGEND	
SYM	CH
□	75
PARAMETER	
VEL-2RT	

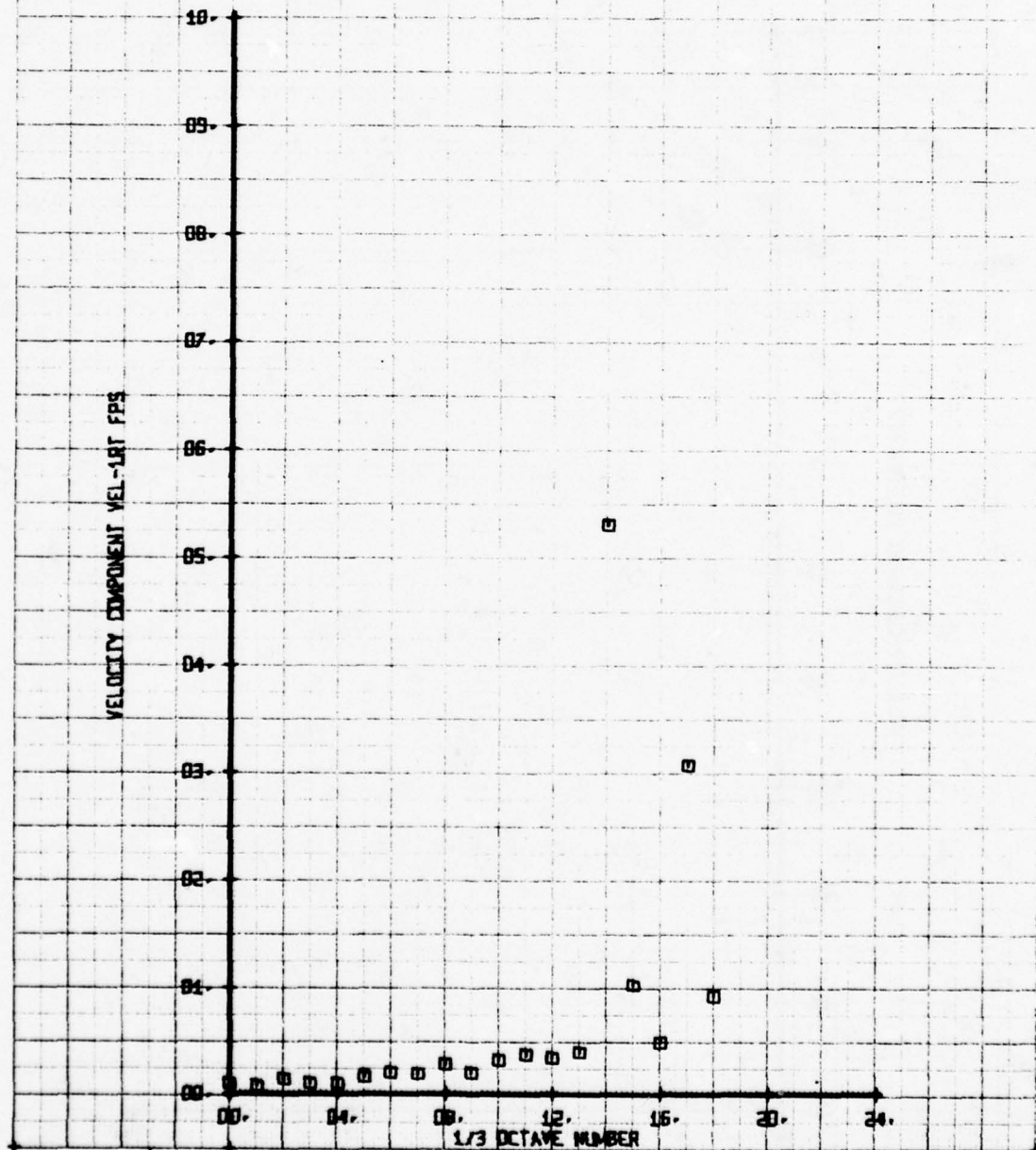
VELOCITY COMPONENT VEL-2RT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE AT 1/8 C.-L.
 RUN 111 TP 20

SYM	CH	PARAMETER
□	74	VEL-1RT

VELOCITY COMPONENT VEL-1RT FPS



ET 1
 WT 169

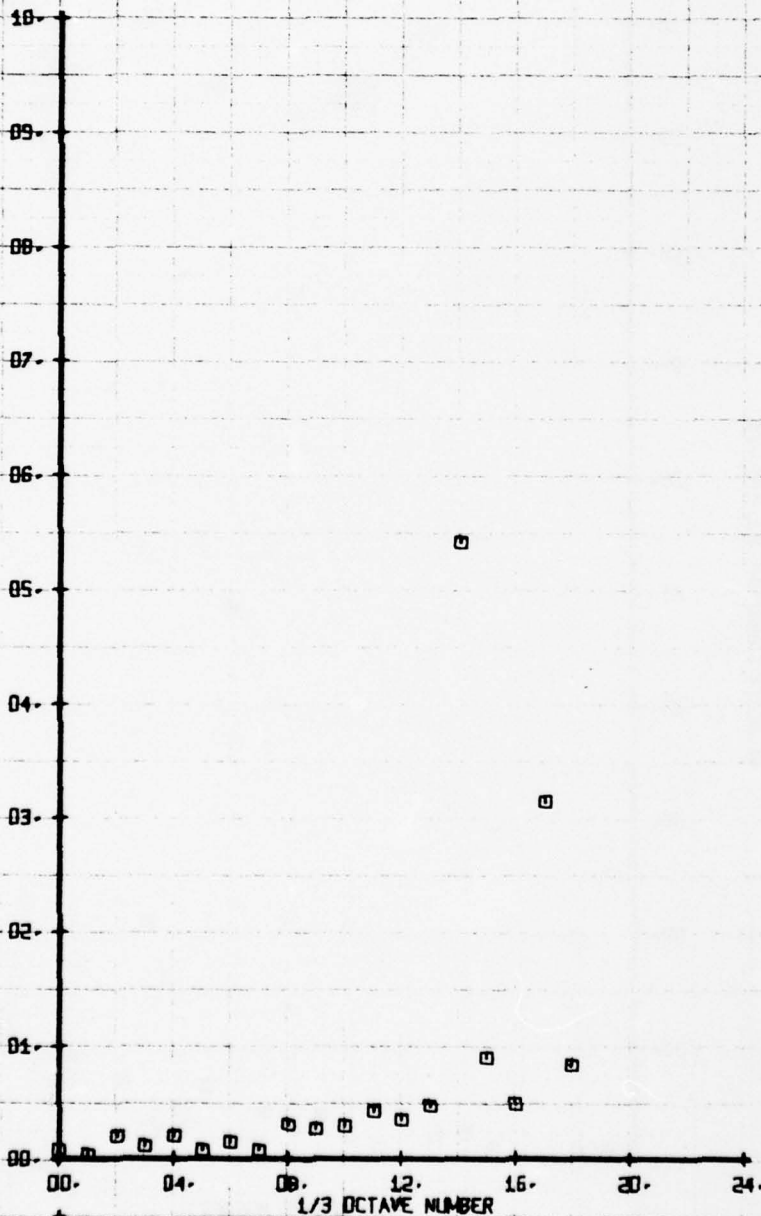
52

SET 1
 BWT 169

NOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE AT T/R C-L.
 RUN 111 TP 21

SYN CH PARAMETER
 0 74 VEL-1RT

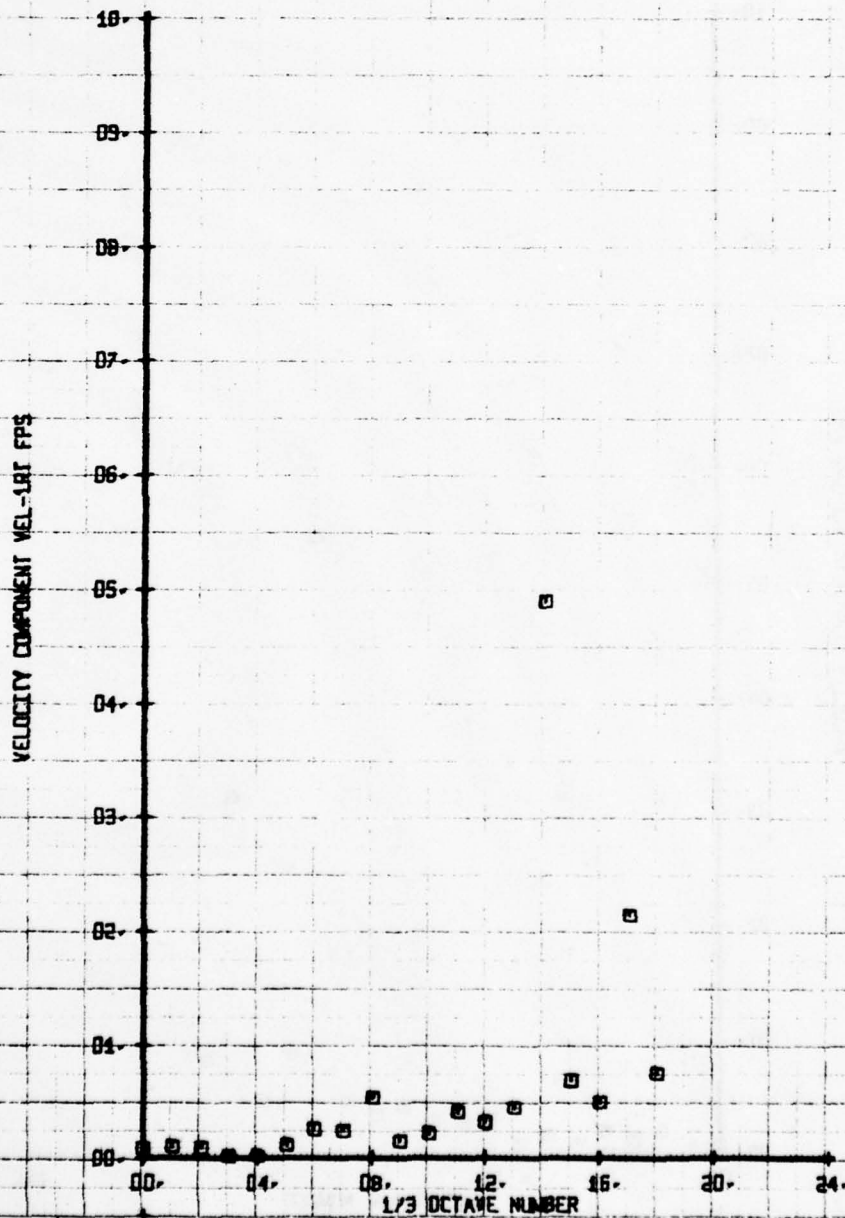
VELOCITY COMPONENT VEL-1RT FPS



HET 1
 WT 169

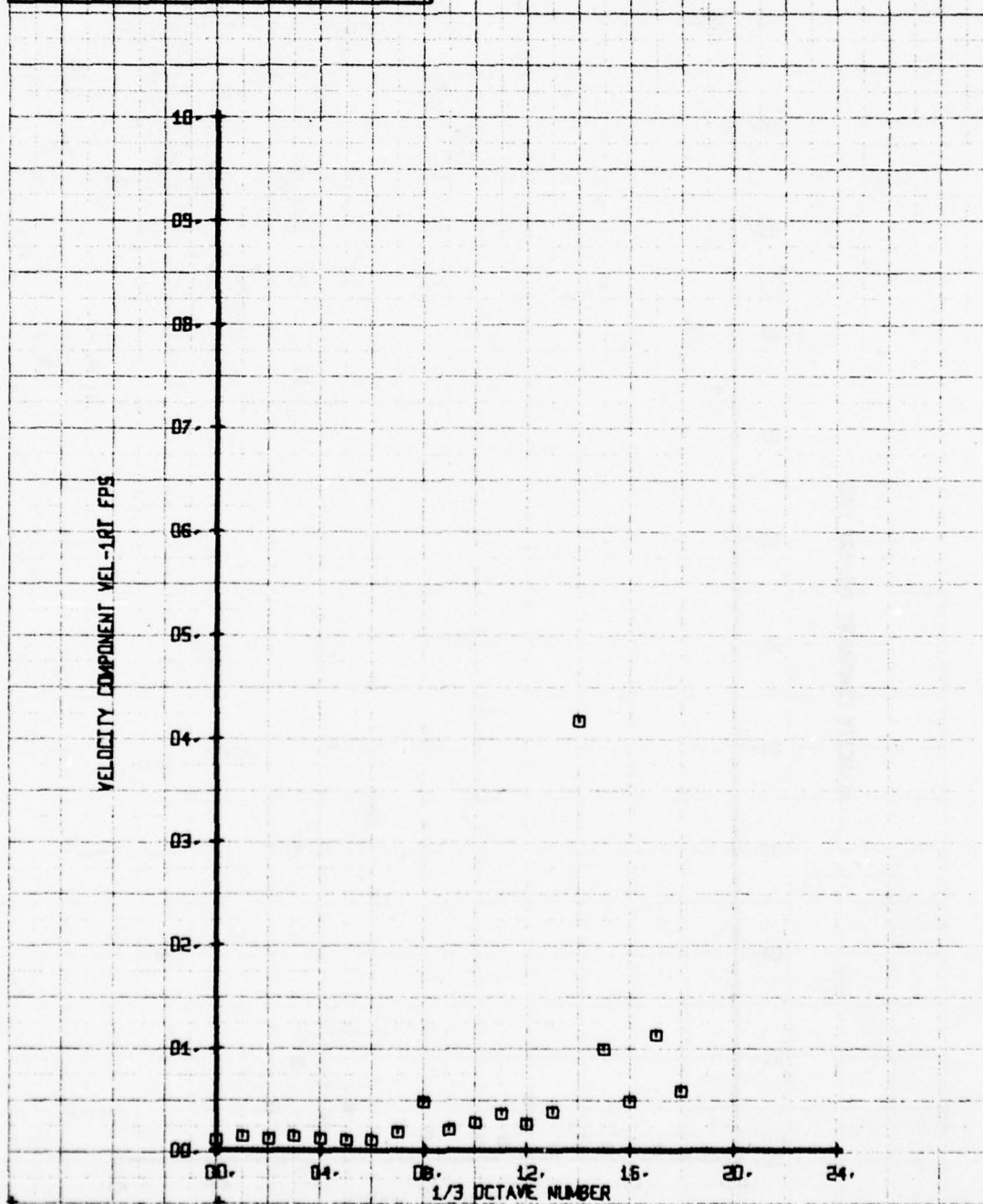
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE AT T/R C-L.
 RUN 111 TP 22

SYM	CH	PARAMETER
□	74	VEL-1RT



NOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFG. TRAVERSE AT 1/R C.L.
 RUN 111 TP 24

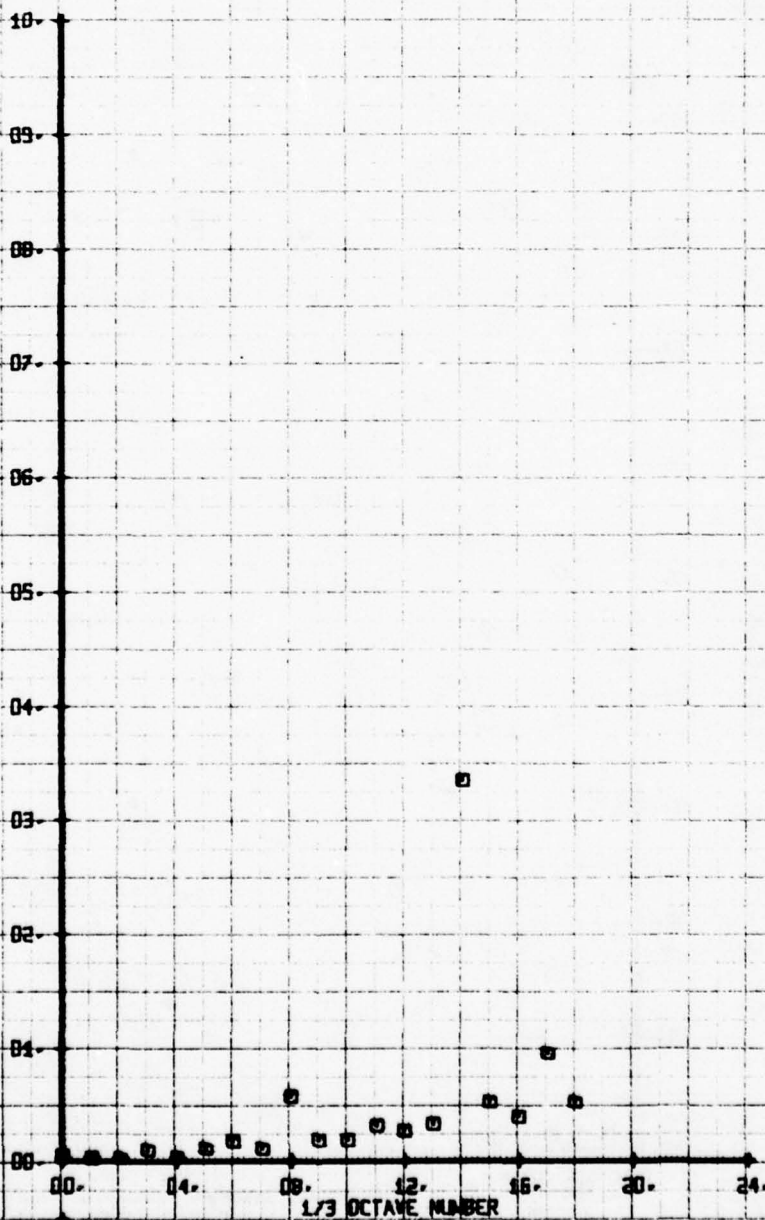
LEGEND		
SYM	CH	PARAMETER
□	74	VEL-1RT



NOT FROM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE AT 1/R C-L.
 RUN 111 TP 25

SYM	CH	PARAMETER
□	74	VEL-1RT

VELOCITY COMPONENT VEL-1RT FPS

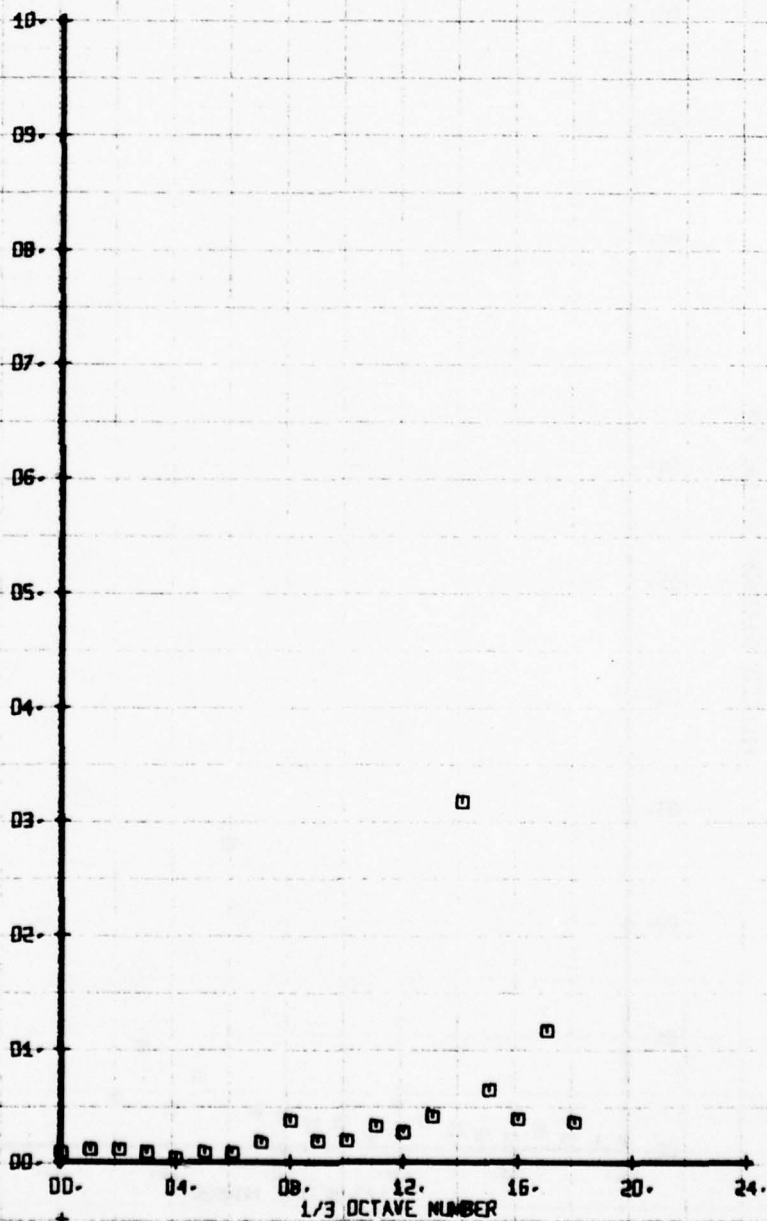


HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE AT 1/R C-L.
RUN 111 TP 29

SYM
□

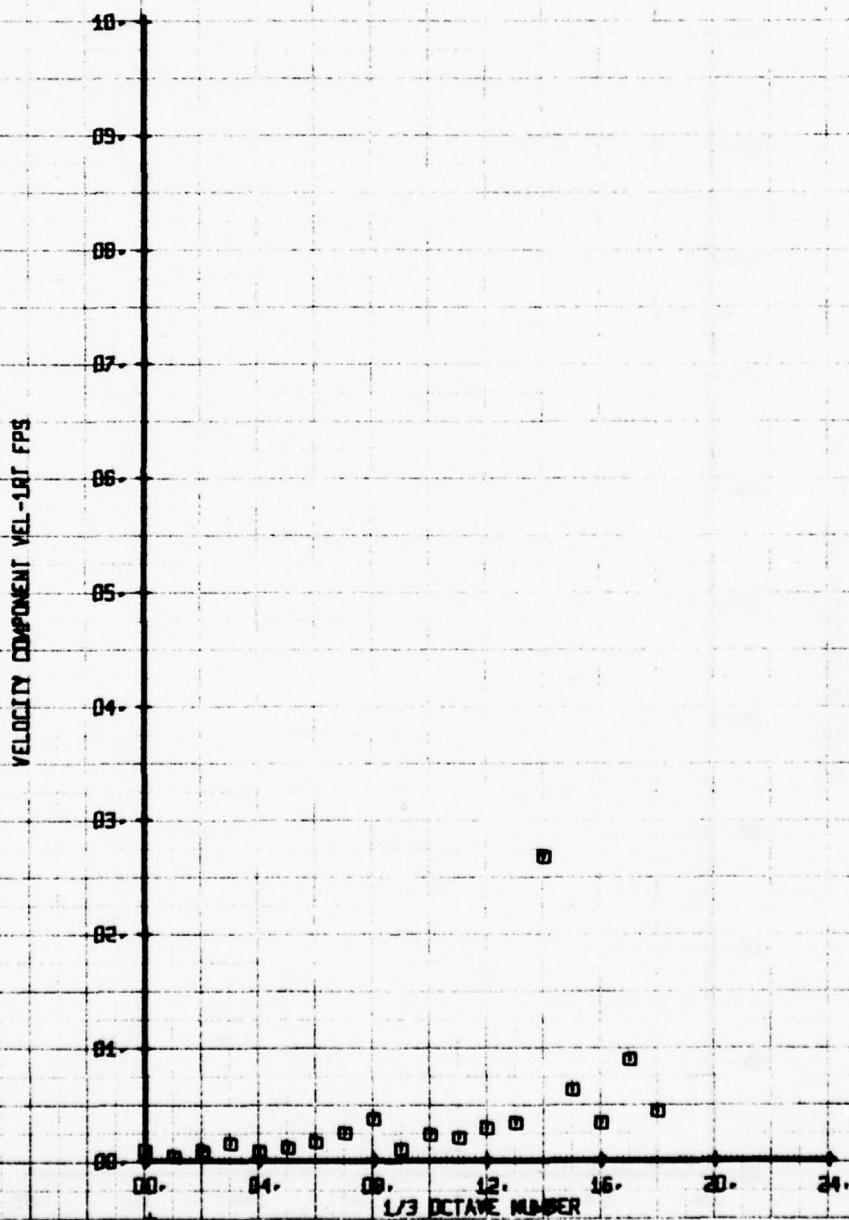
LEGEND
CH 74
PARAMETER
VEL-1RT

VELOCITY COMPONENT VEL-1RT FPS



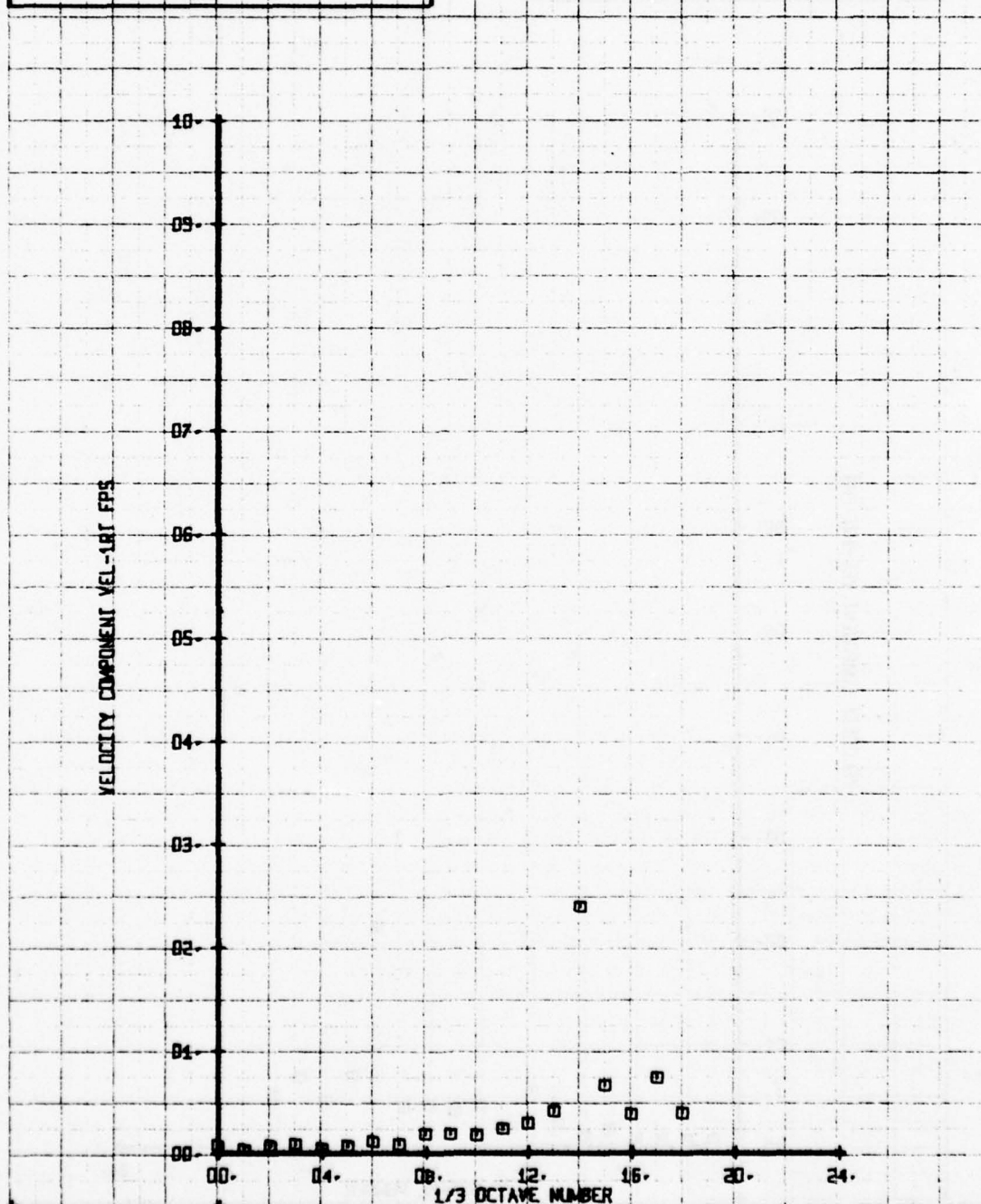
HOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG: TRAVERSE AT 1/8 C-L
 RUN 111 TP 30

LEGEND		
SYM	CH	PARAMETER
□	74	VEL-1RT



NOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG- TRAVERSE AT T/R C-L-
 RUN 111 TP 32

LEGEND		
SYM	CH	PARAMETER
□	74	VEL-1RT



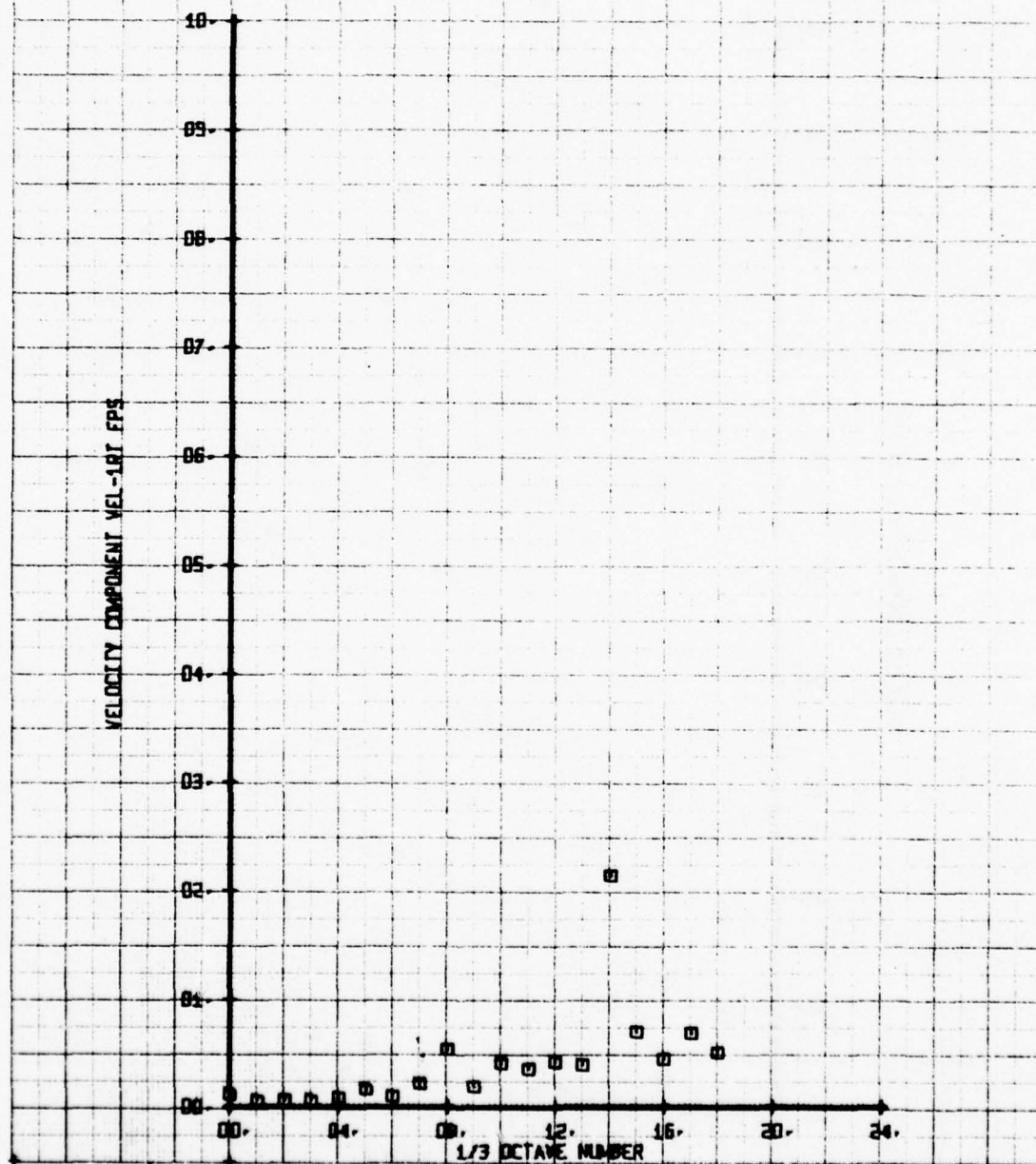
NOT FILM WAVE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE AT 1/R C.L.

RUN 111 TP 34

SYM
□

CH
74

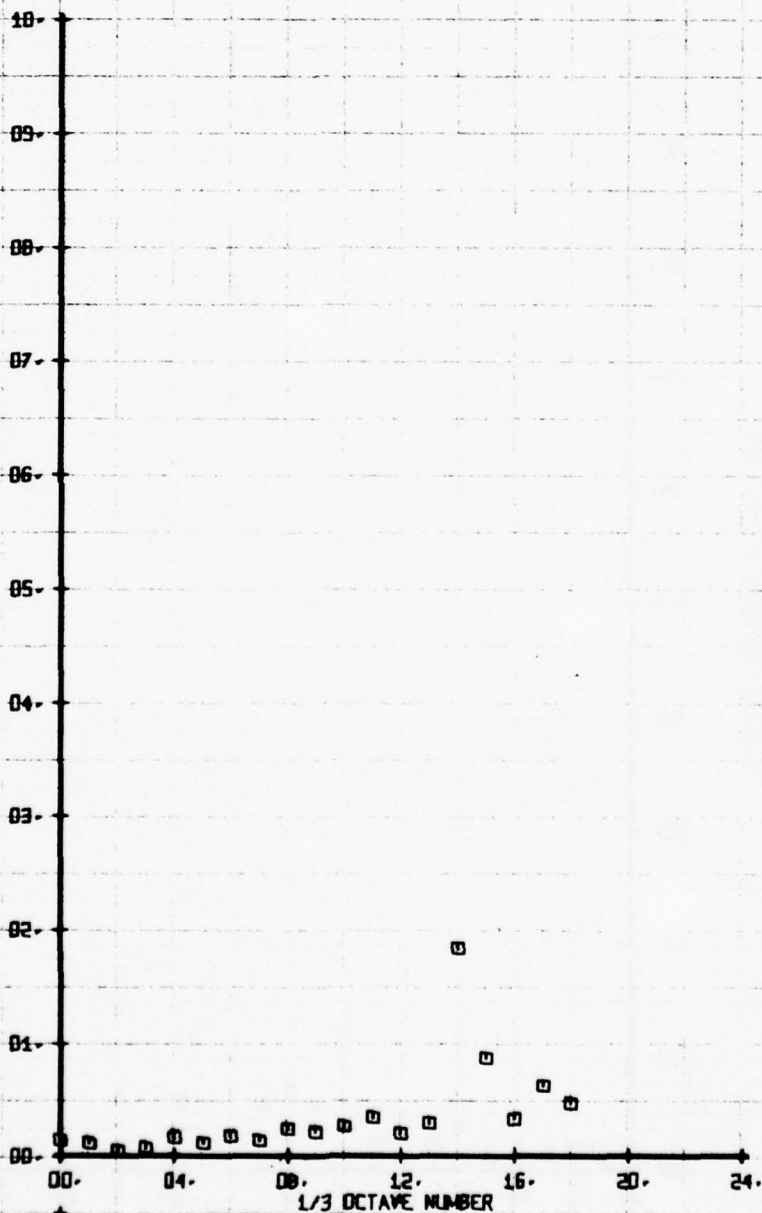
LEGEND
PARAMETER
VEL-1RT



NOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE AT T/R C-L.
 RUN 111 TP 36

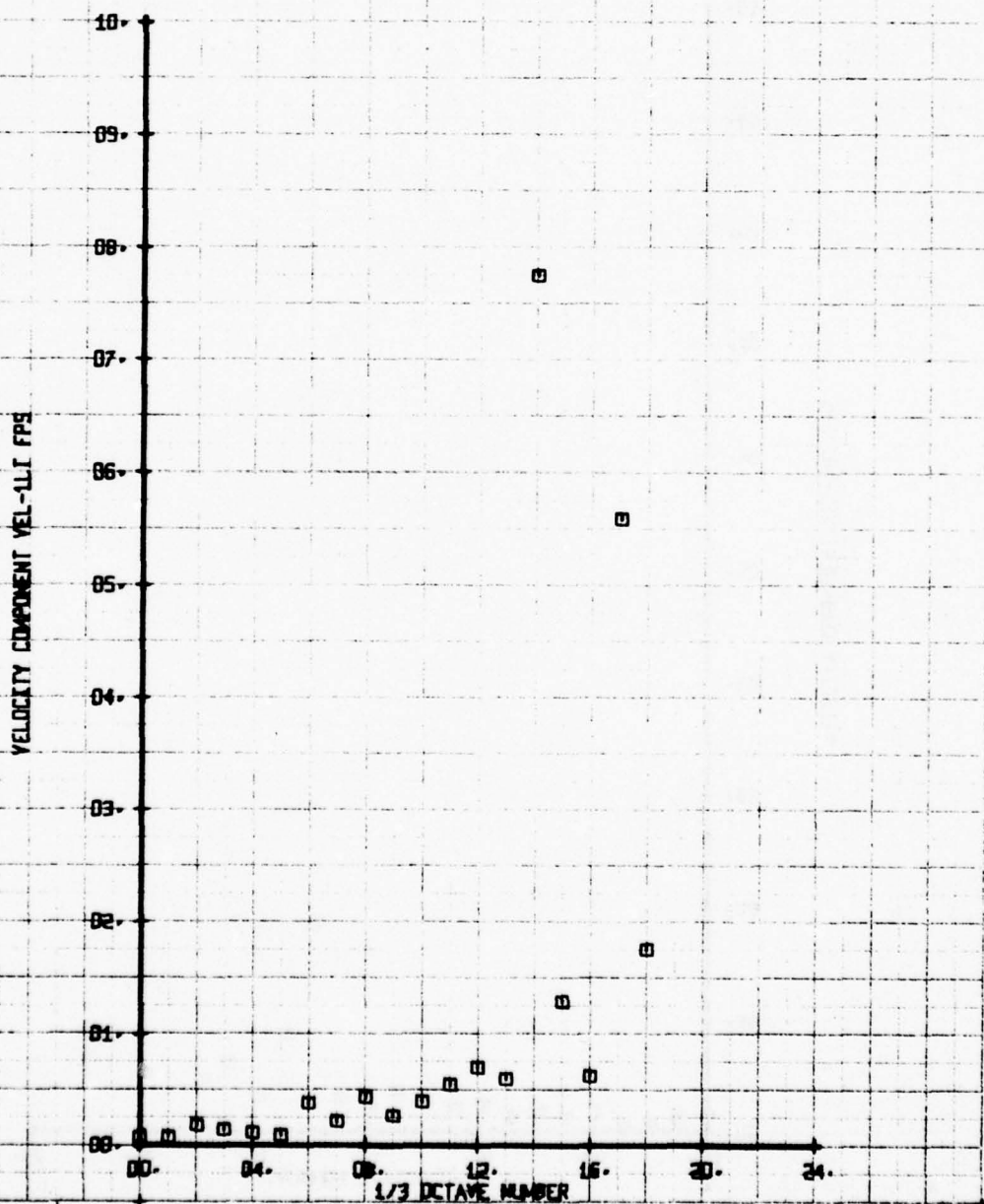
SYM	CH	LEGEND	PARAMETER
□	74		VEL-1RT

VELOCITY COMPONENT VEL-1RT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE AT 1/8 C.L.
 RUN 111 TP 20

LEGEND
 SYM CH PARAMETER
 □ 73 VEL-1LT

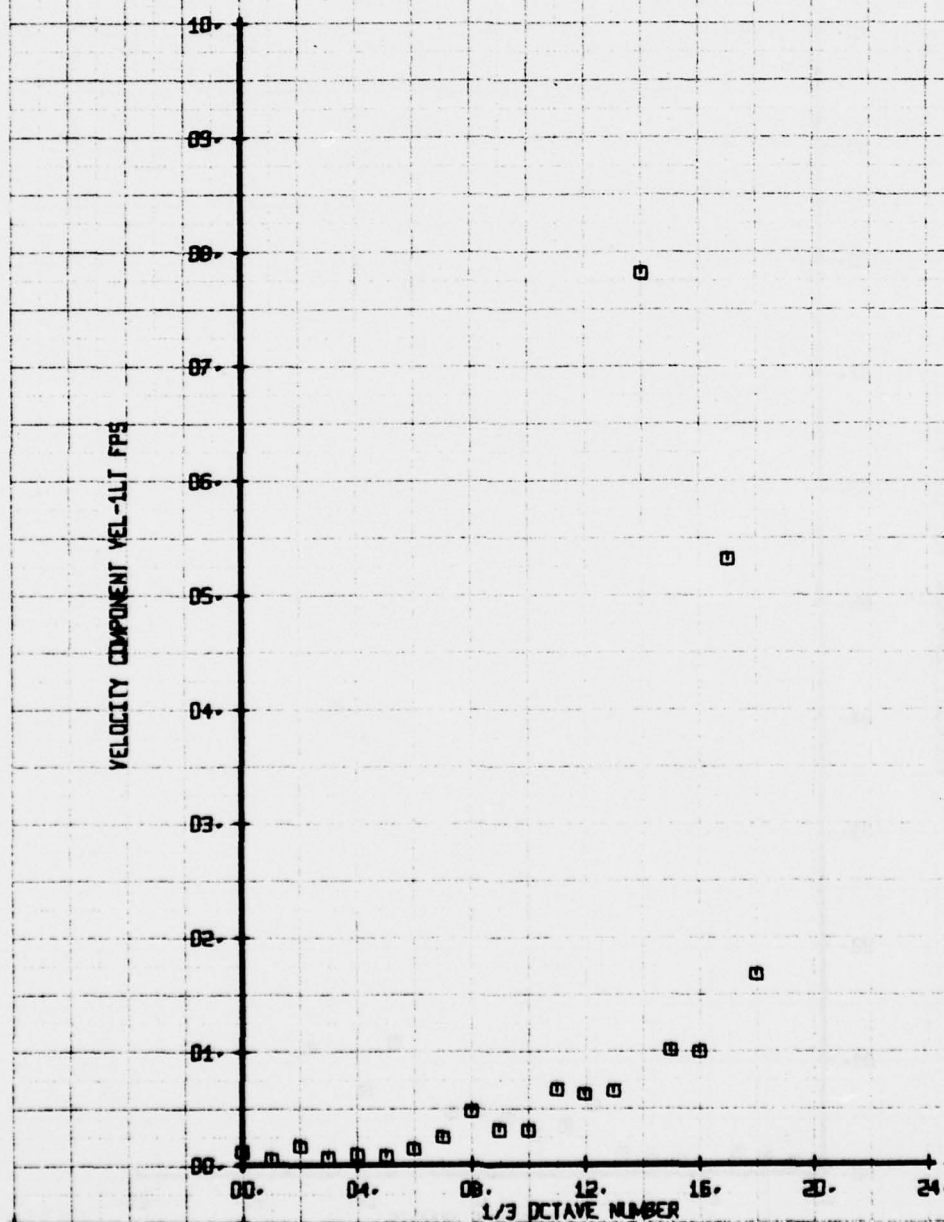


ET 1
 WT 169

SET 1
 BWWT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE AT T/R C.J.
 RUN 111 TP 21

LEGEND		
SYM	CH	PARAMETER
□	73	VEL-1LT

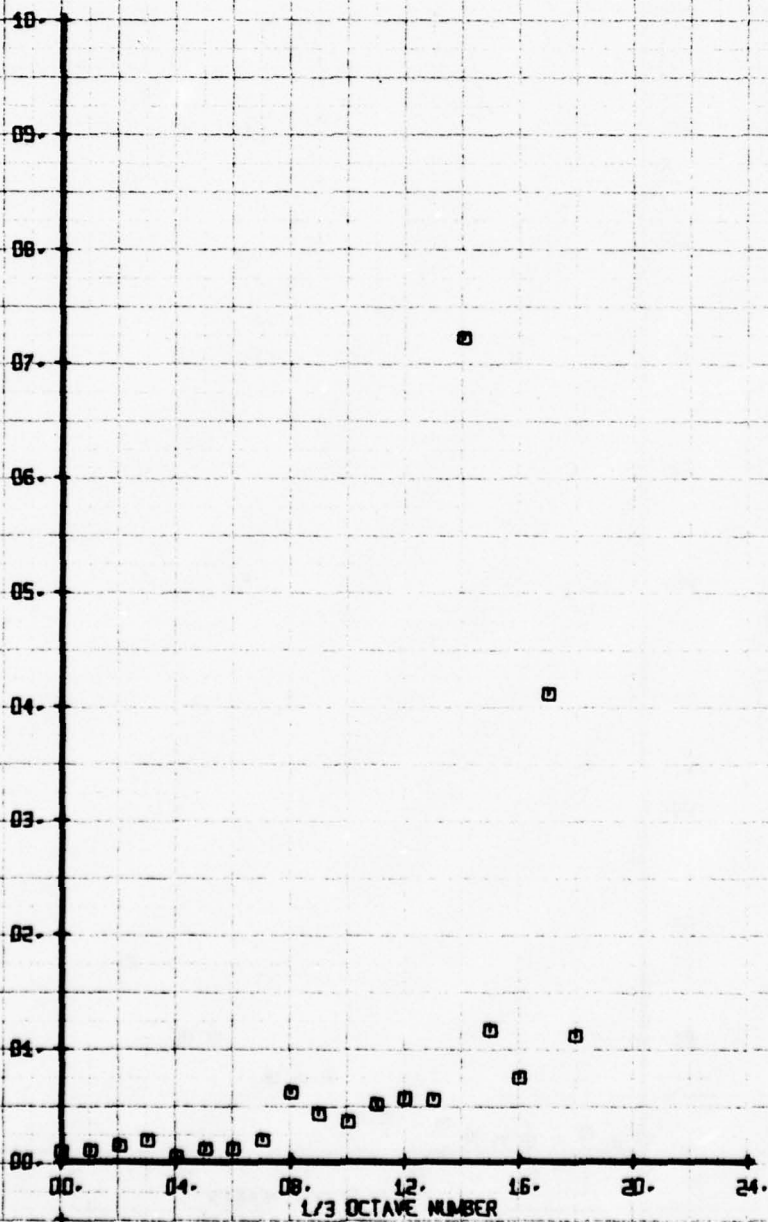


ET 1
 WT 169

NOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFG. TRAVERSE AT 1/R P.L.
 RUN 111 TP 22

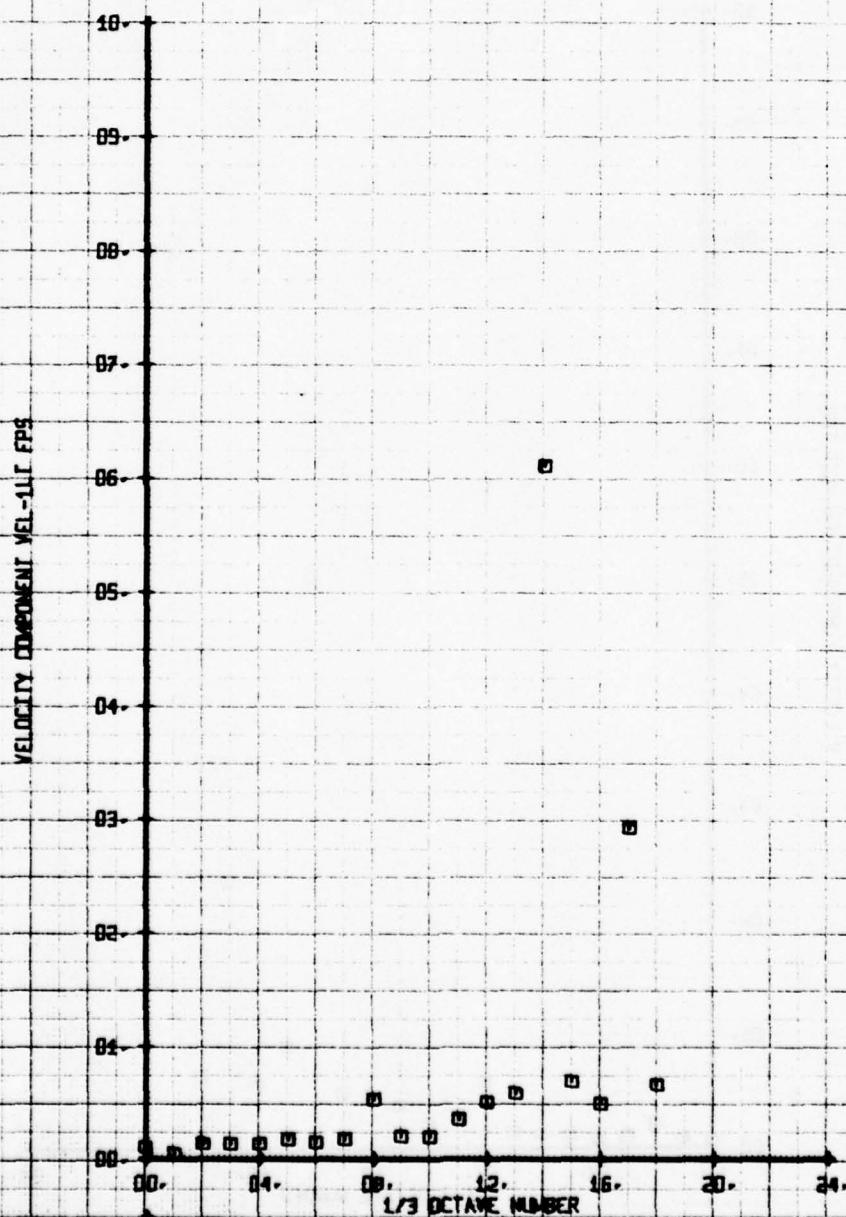
LEGEND		
SYM	CH	PARAMETER
□	73	VEL-1LT

VELOCITY COMPONENT VEL-1LT FPS



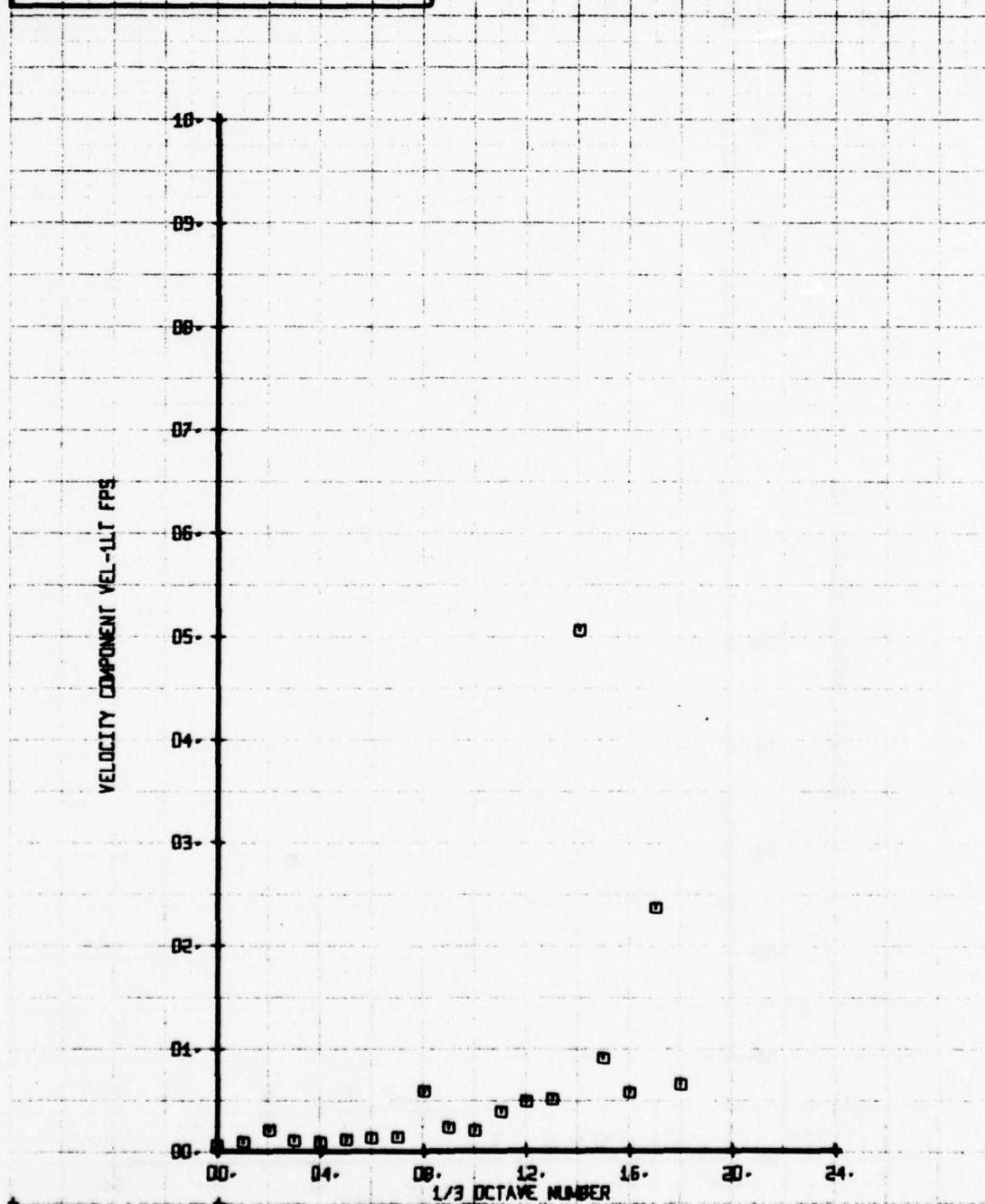
NOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG- TRAVERSE AT 1/8 C.L.
 RUN 111 TP 24

LEGEND		
SYM	CH	PARAMETER
□	73	VEL-1LT



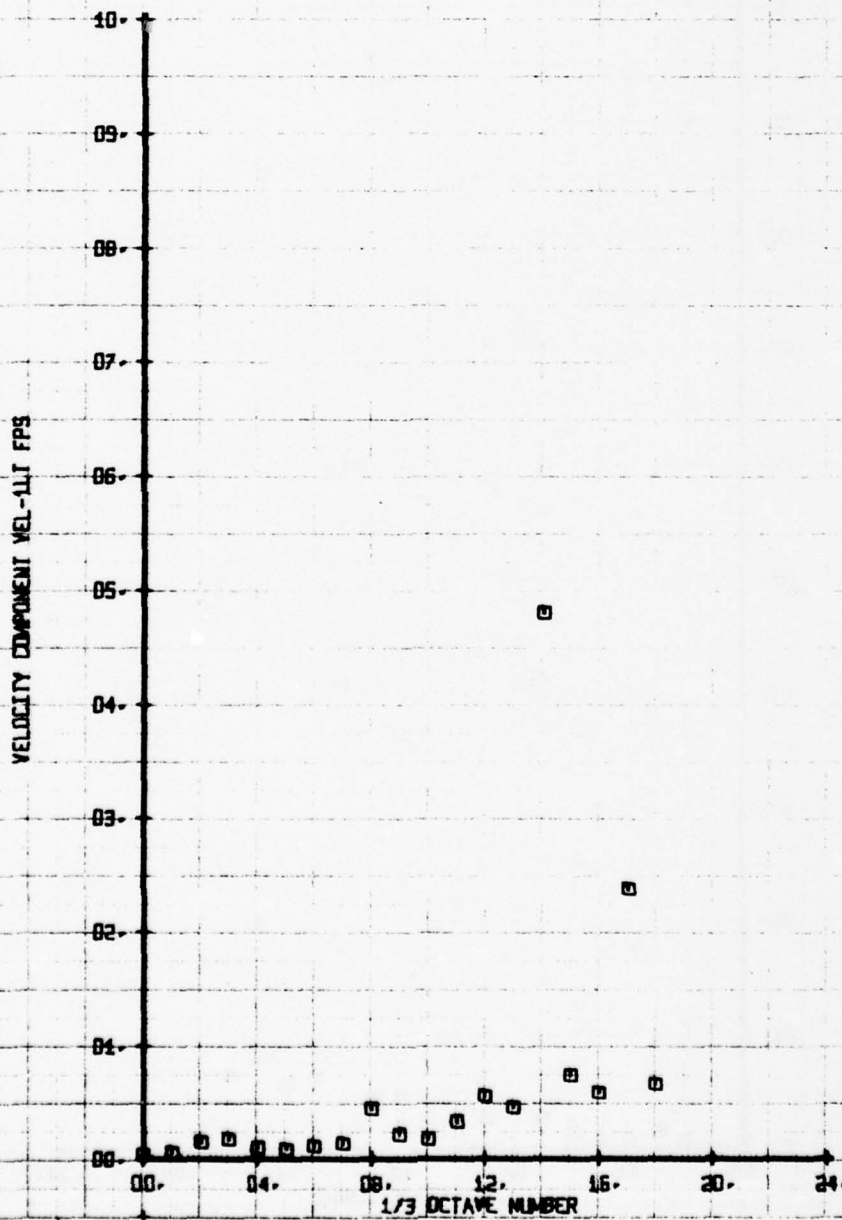
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE AT T/R C.L.
 RUN 111 TP 25

LEGEND		
SYM	CH	PARAMETER
□	73	VEL-1LT



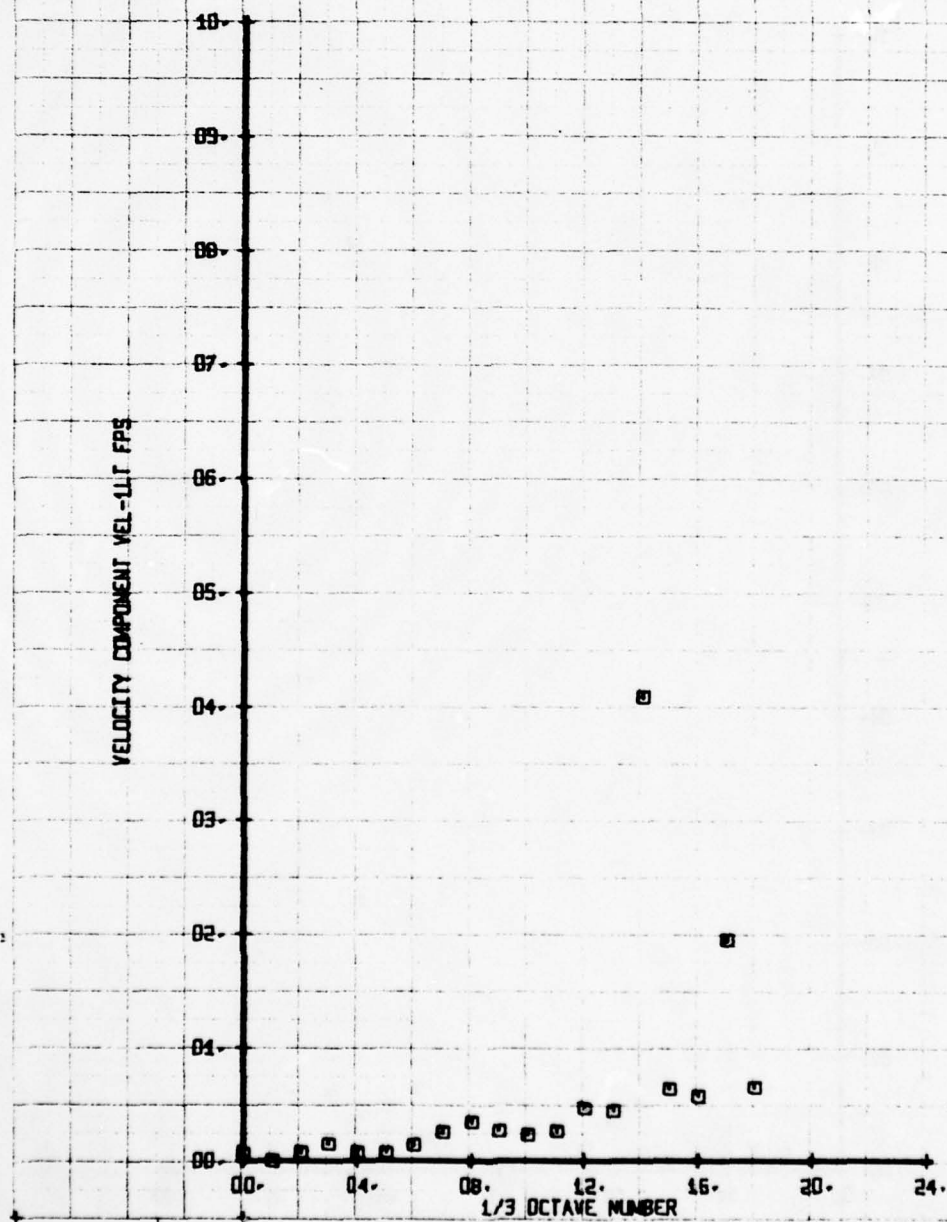
NOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE AT T/R C-L.
 RUN 111 TP 2B

SYM	CH	PARAMETER
0	73	VEL-1LT



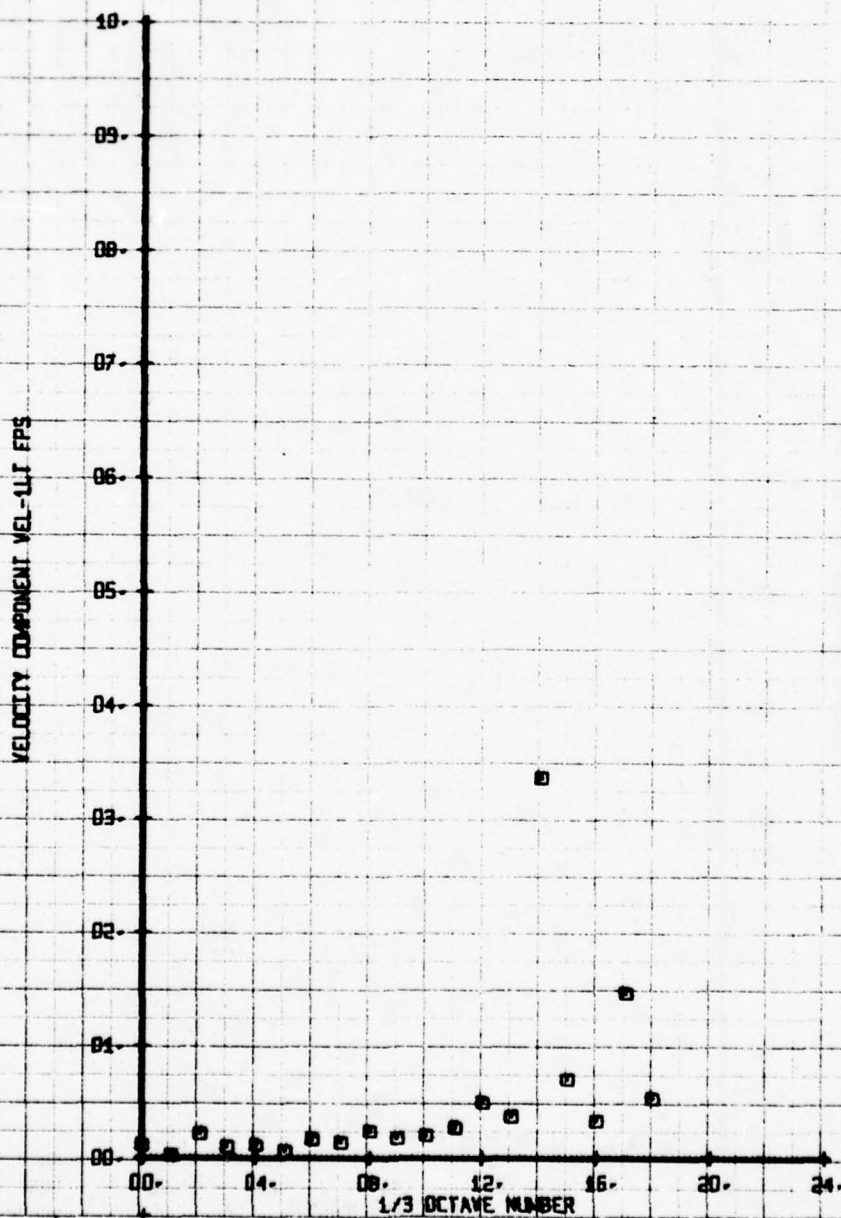
NOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE AT T/R C-1.
 RUN 111 TP 30

LEGEND
 CH 73
 PARAMETER
 VEL-1LT



NOT FILM WARE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE AT T/R C-L.
 RUN 111 TP 32

LEGEND	
SYM	PARAMETER
□	73 VEL-1LT



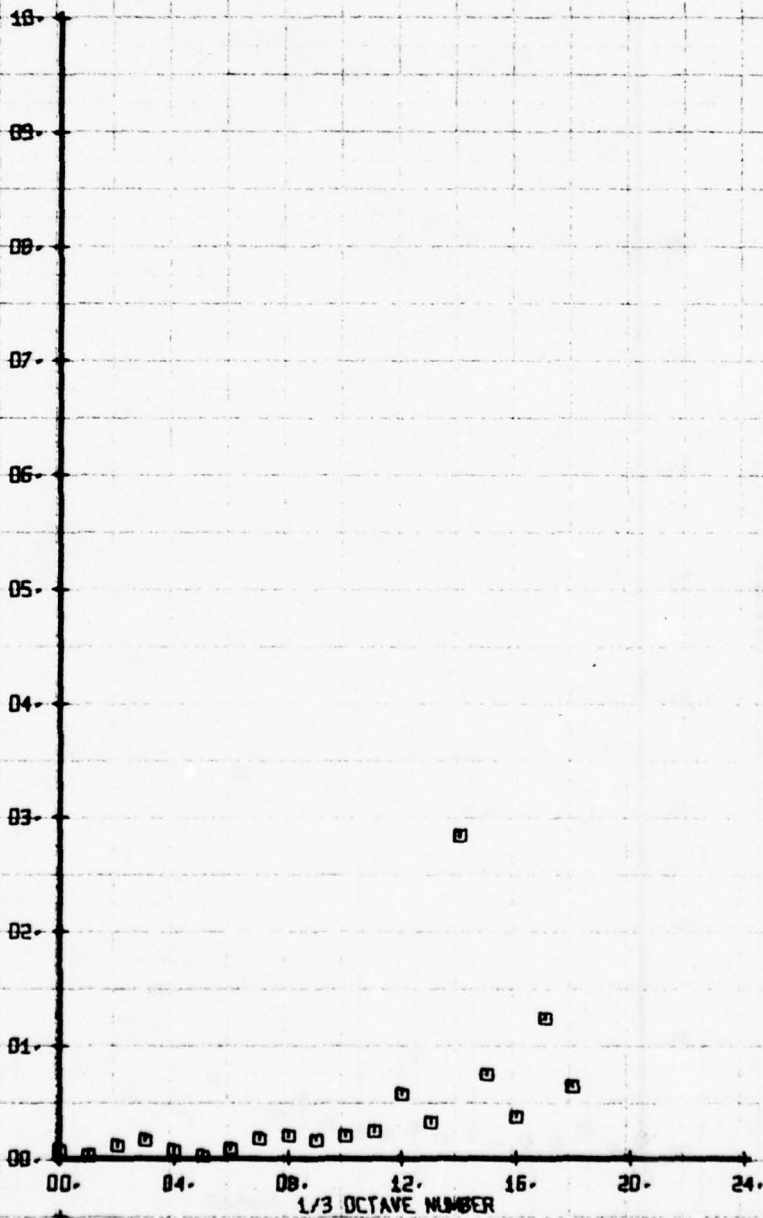
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE AT T/R C.L.
 RUN 111 TP 34

SYM
 □

CH
 73

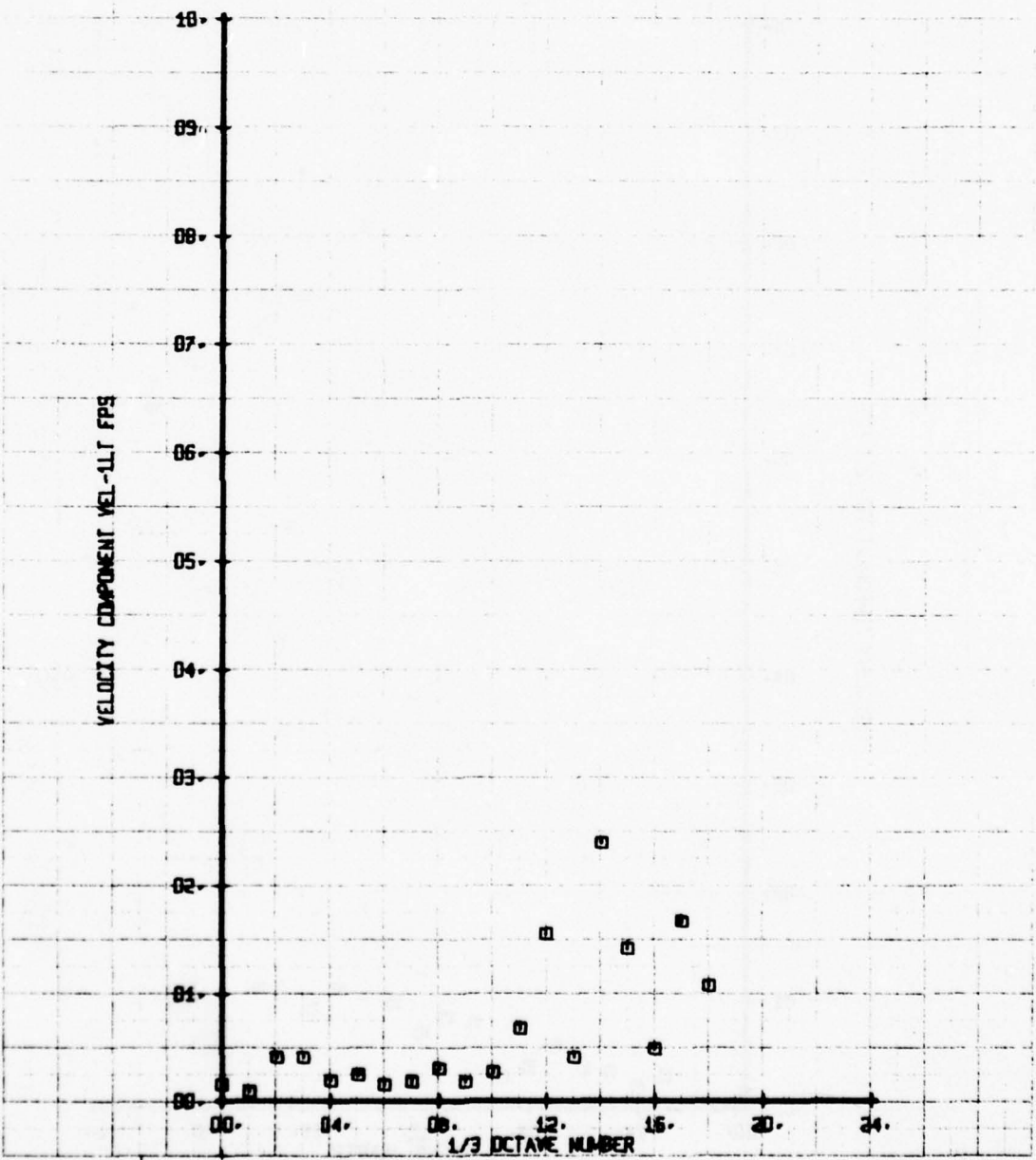
LEGEND
 PARAMETER
 VEL-1LT

VELOCITY COMPONENT VEL-1LT FPS



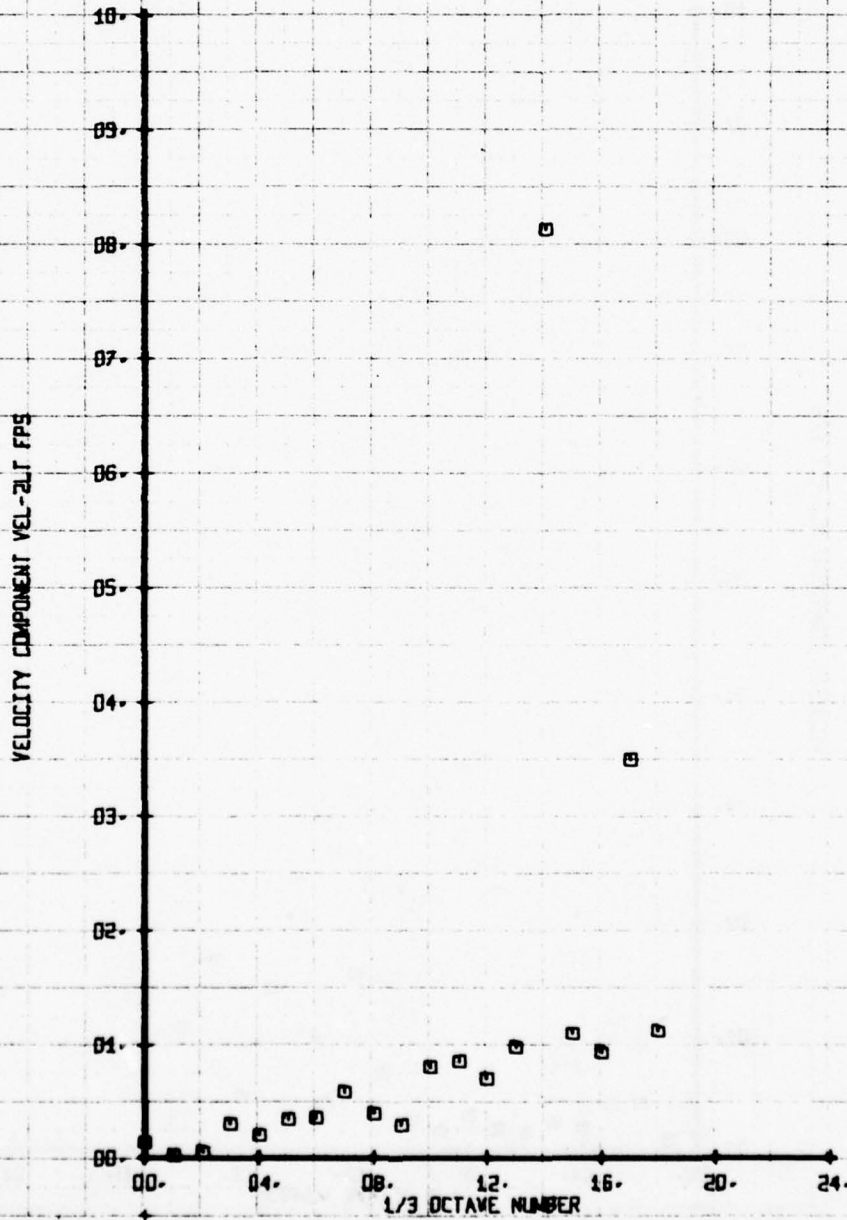
HOT FILM WAVE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE AT 1/2 C.L.
RUN 111 TP 36

SYM	CH	PARAMETER
0	73	VEL-1LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE AT T/R C.L.
 RUN 111 TP 20

SYM	CH	PARAMETER
□	72	VEL-ZLT

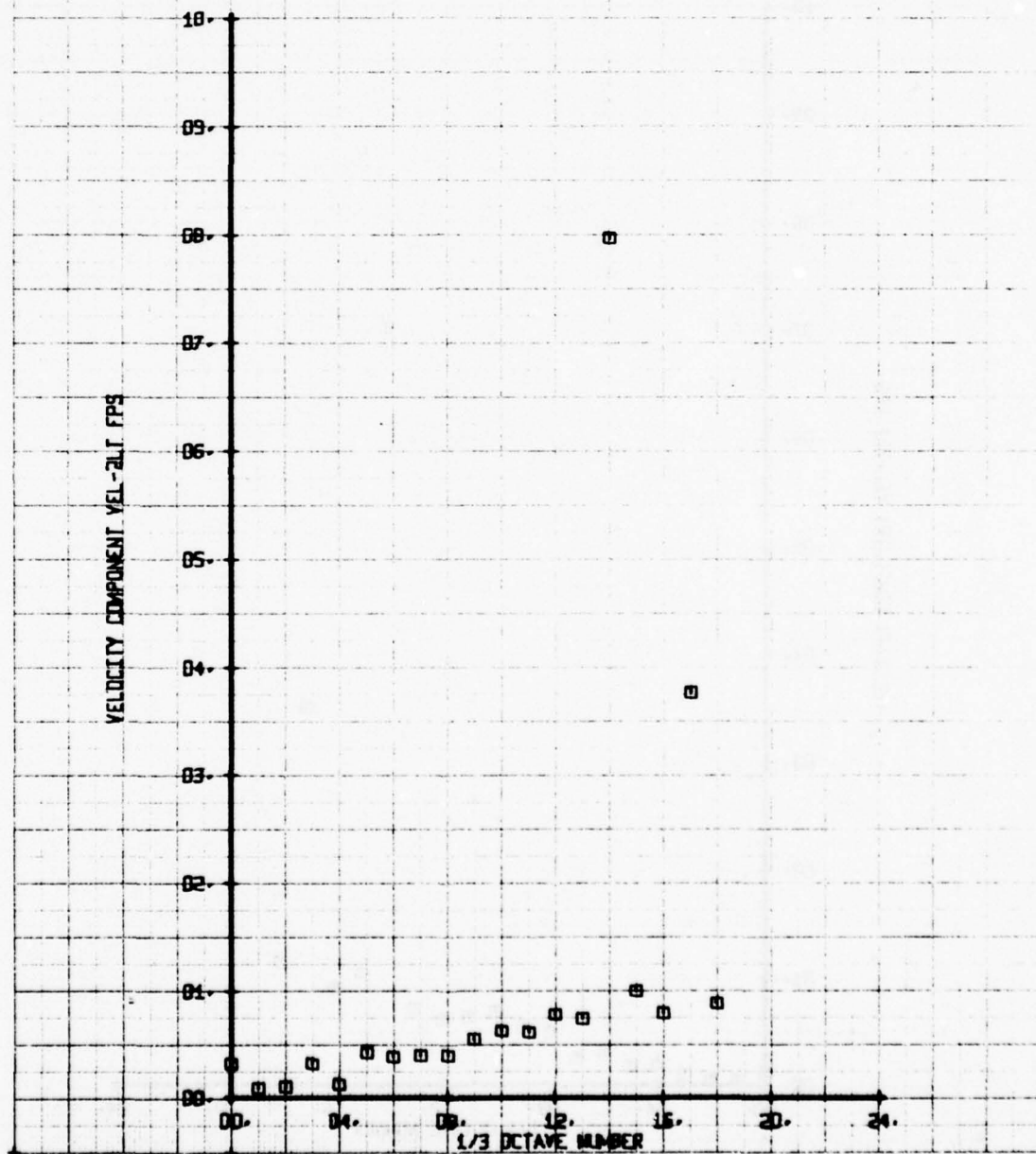


SET 1
 WT 169

SET 1
 BVWT 169

NOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE AT 1/R C.L.
 RUN 111 TP 21

SYN CH PARAMETER
 0 72 VEL-2LT



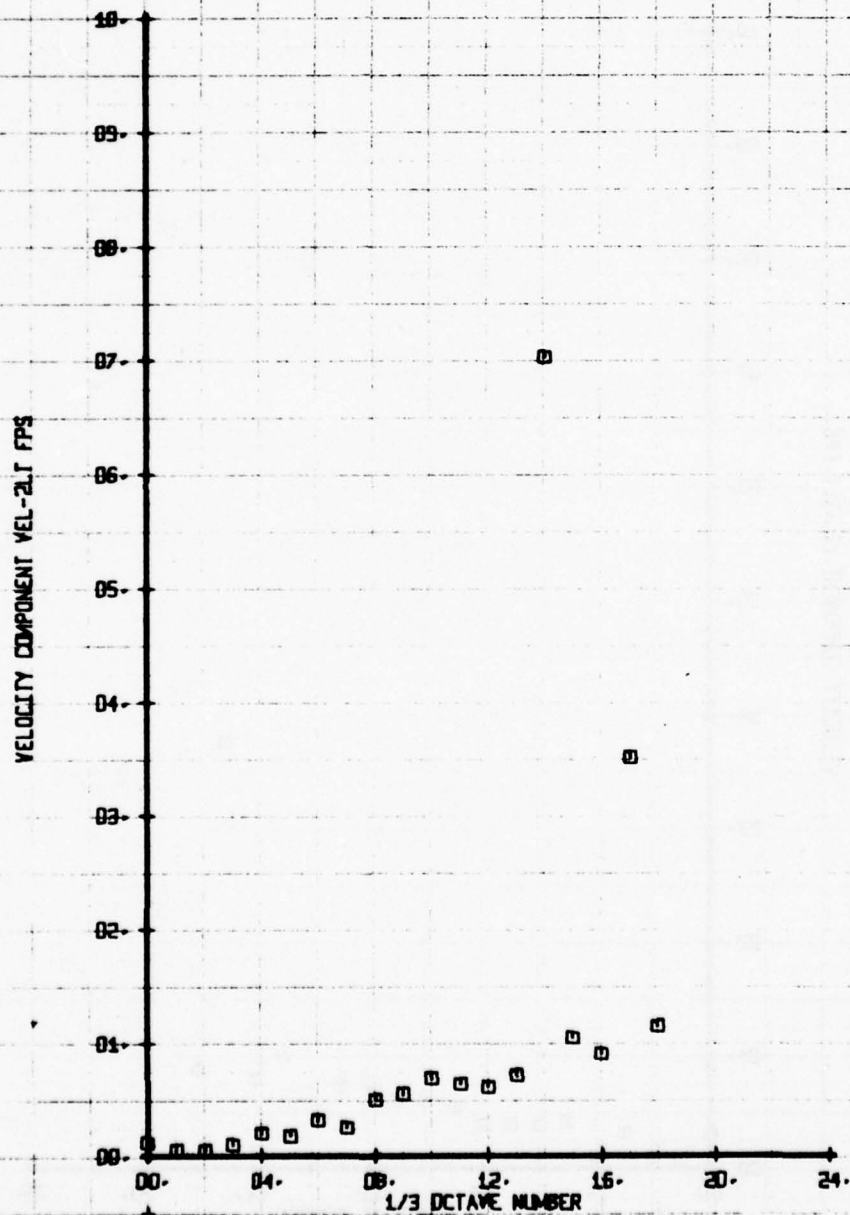
ET 1
 WT 169

NOT FILM WIRE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE AT 1/8 C.L.
 RUN 111 TP 22

SYM
 0

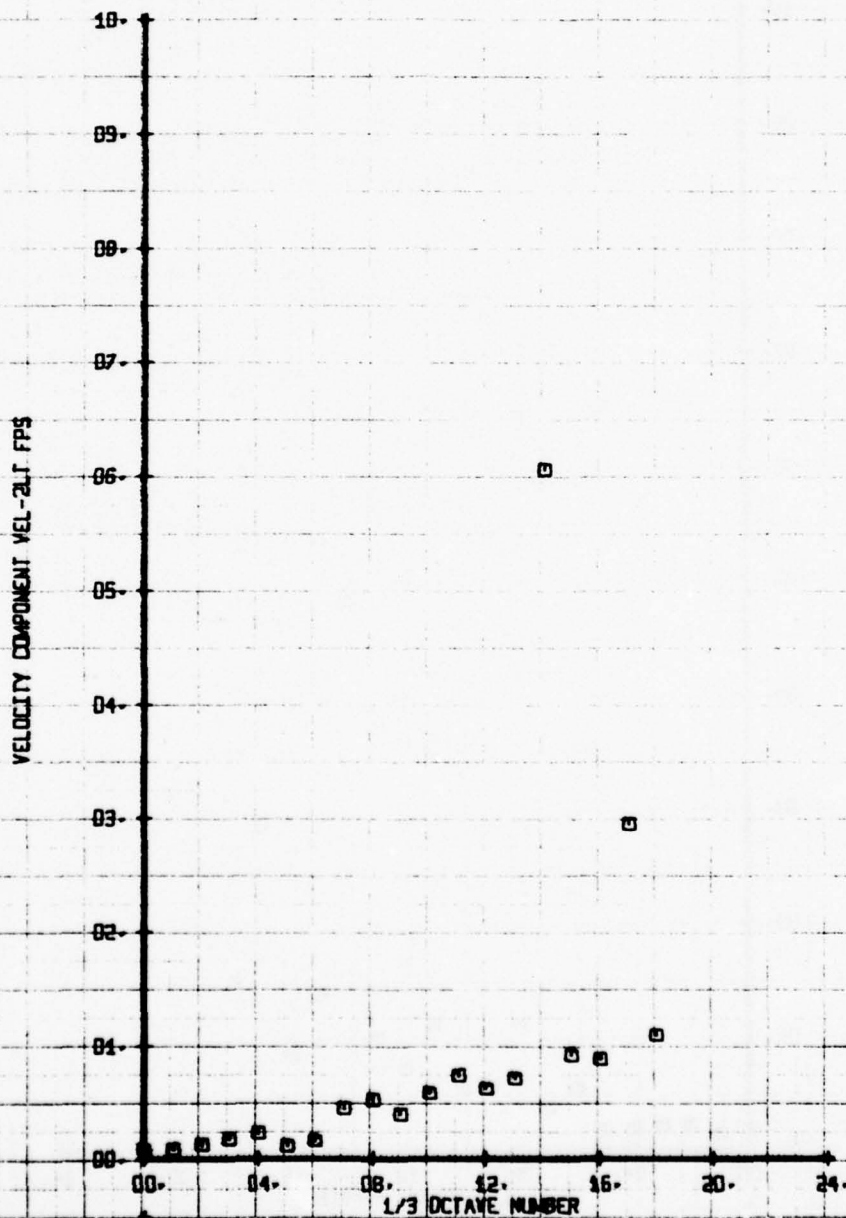
CH
 72

LEGEND
 PARAMETER
 VEL-2LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE AT T/R C-L.
 RUN 111 TP 24

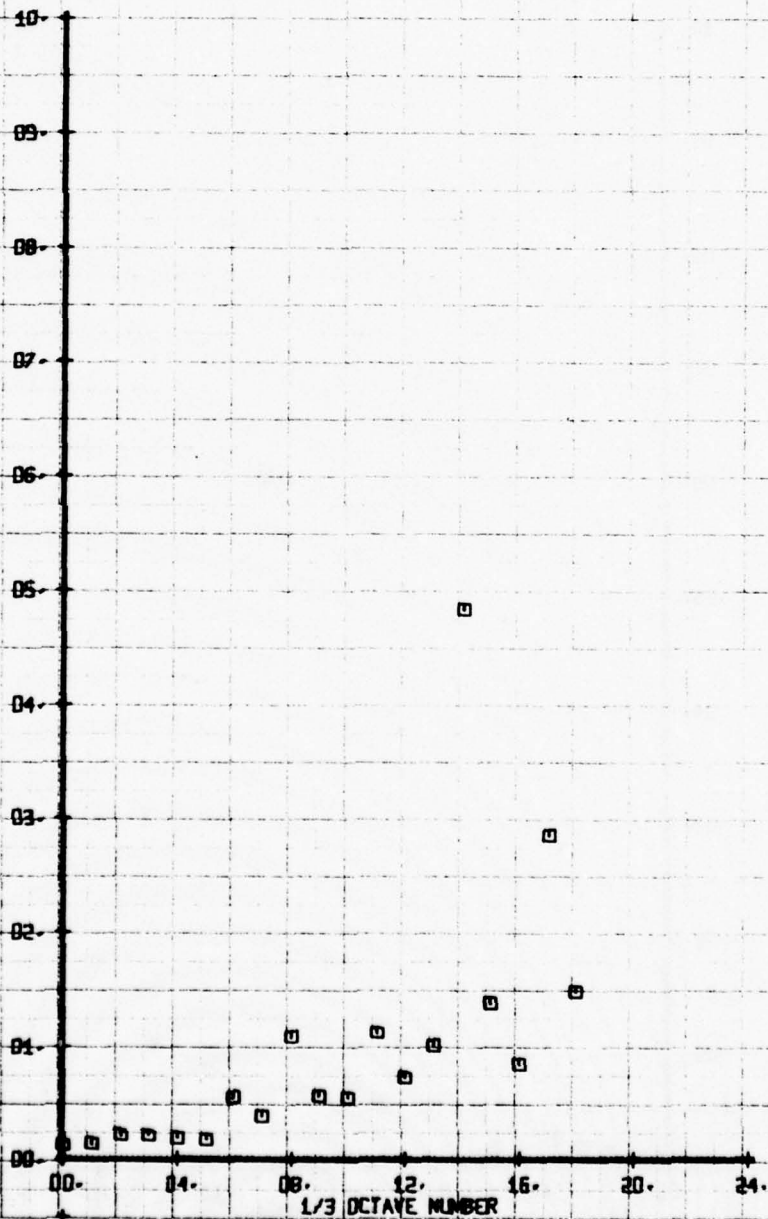
SYM	CH	PARAMETER
□	72	VEL-2LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE AT I/R C-L.
 RUN 111 TP 26

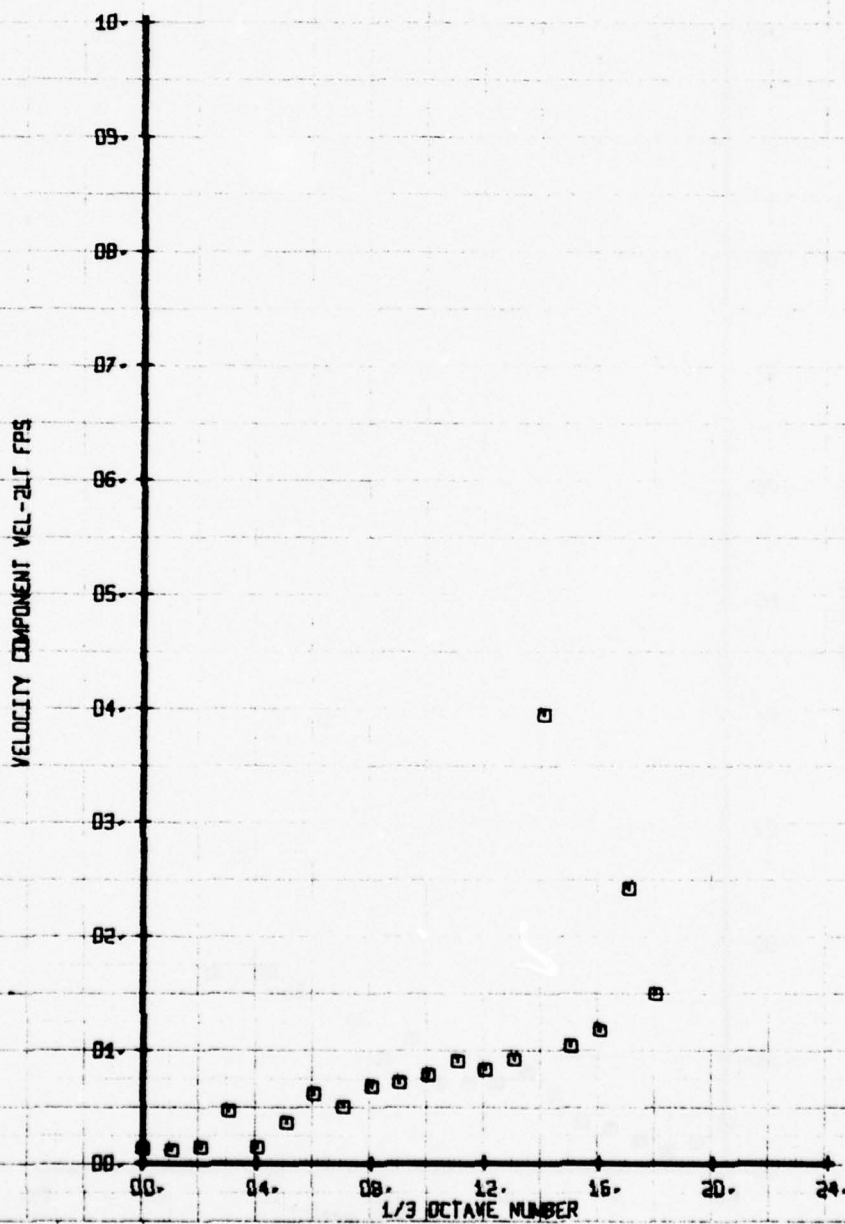
LEGEND		
SYM	CH	PARAMETER
□	72	VEL-2LT

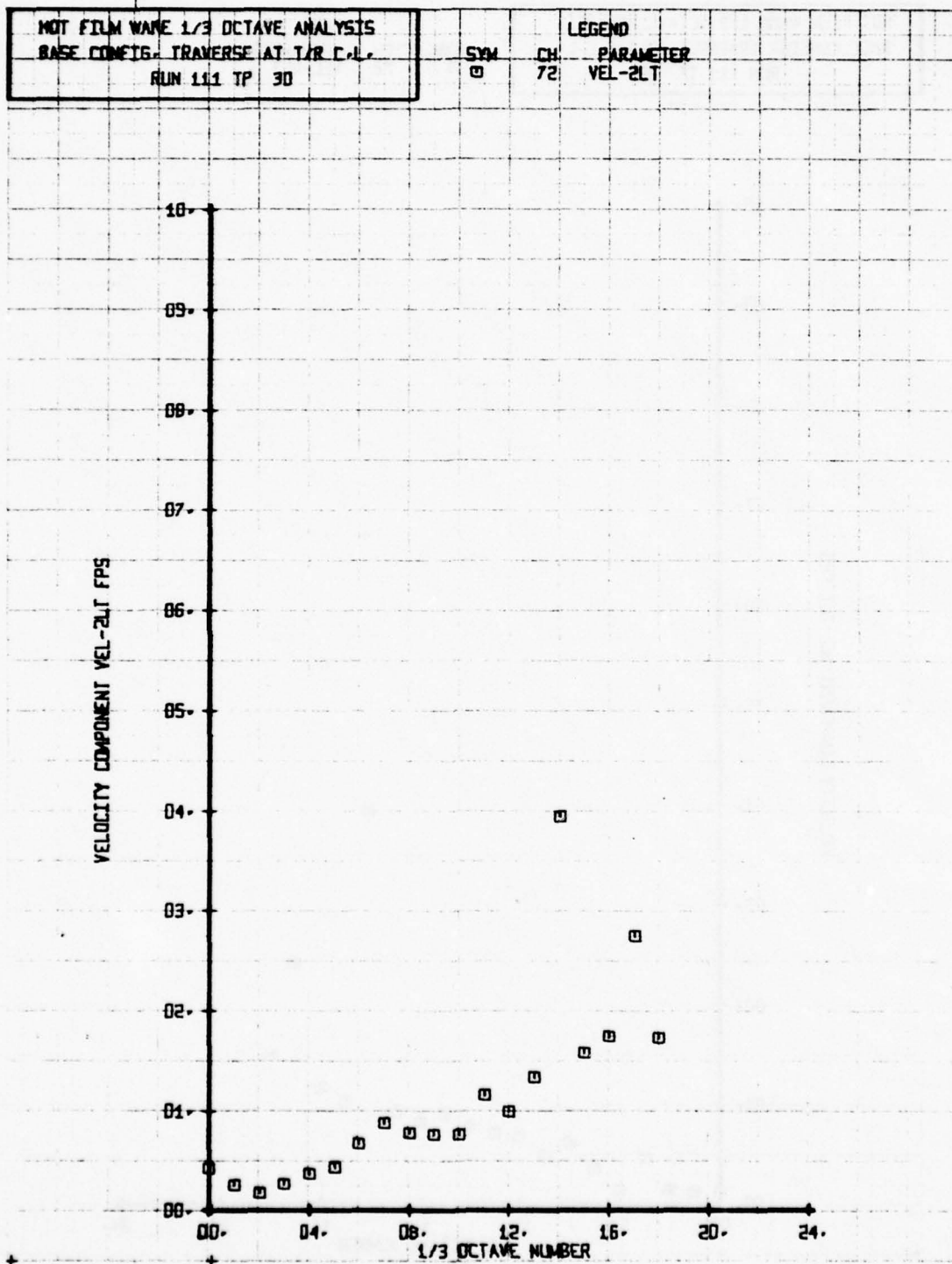
VELOCITY COMPONENT VEL-2LT FPS



NOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG- TRAVERSE AT T/R C-L-
 RUN 111 TP 28

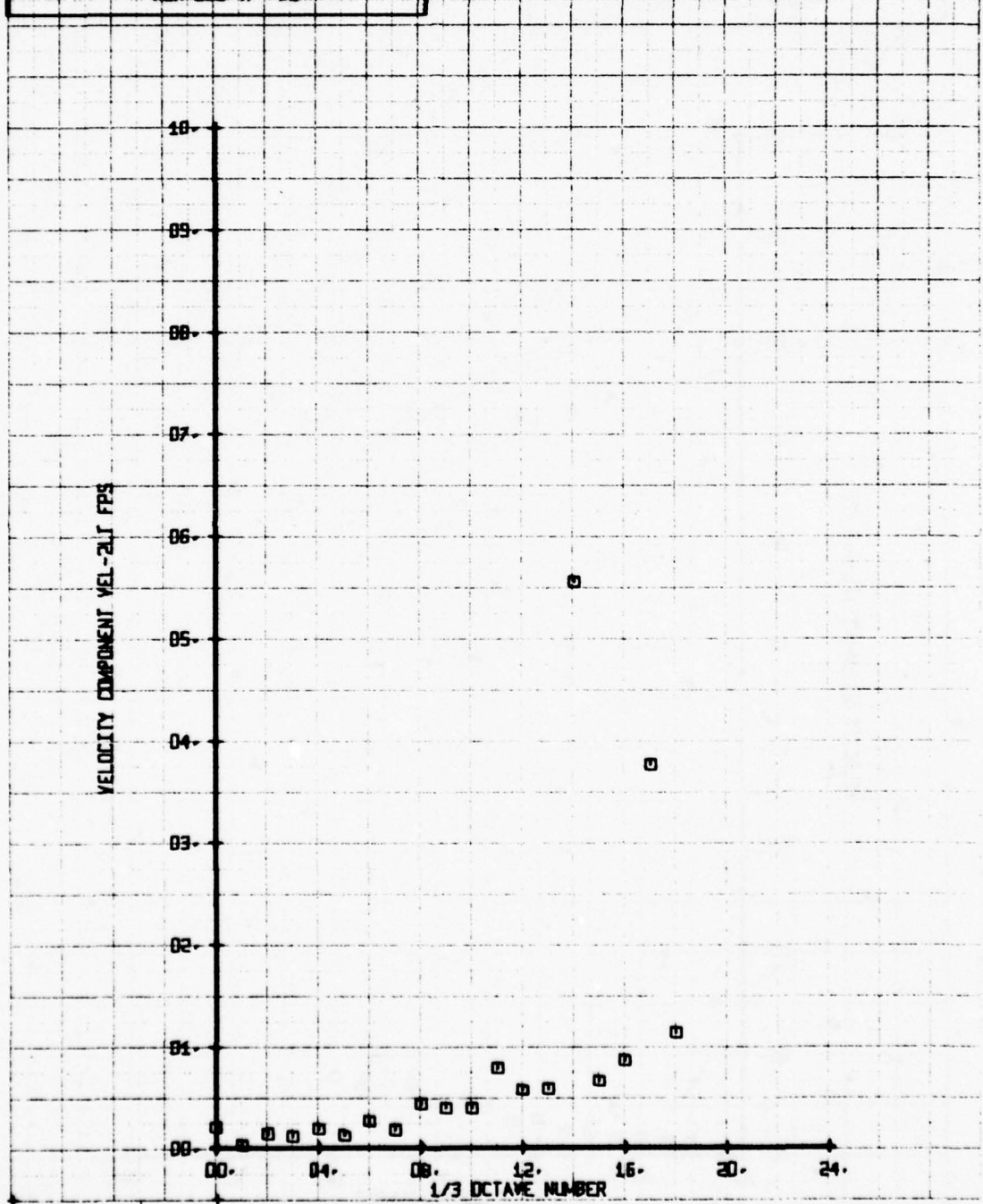
LEGEND
 SYM CH PARAMETER
 □ 72 VEL-ZLT





NOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRANSVERSE AT T/R C-L.
 RUN 111 TP 32

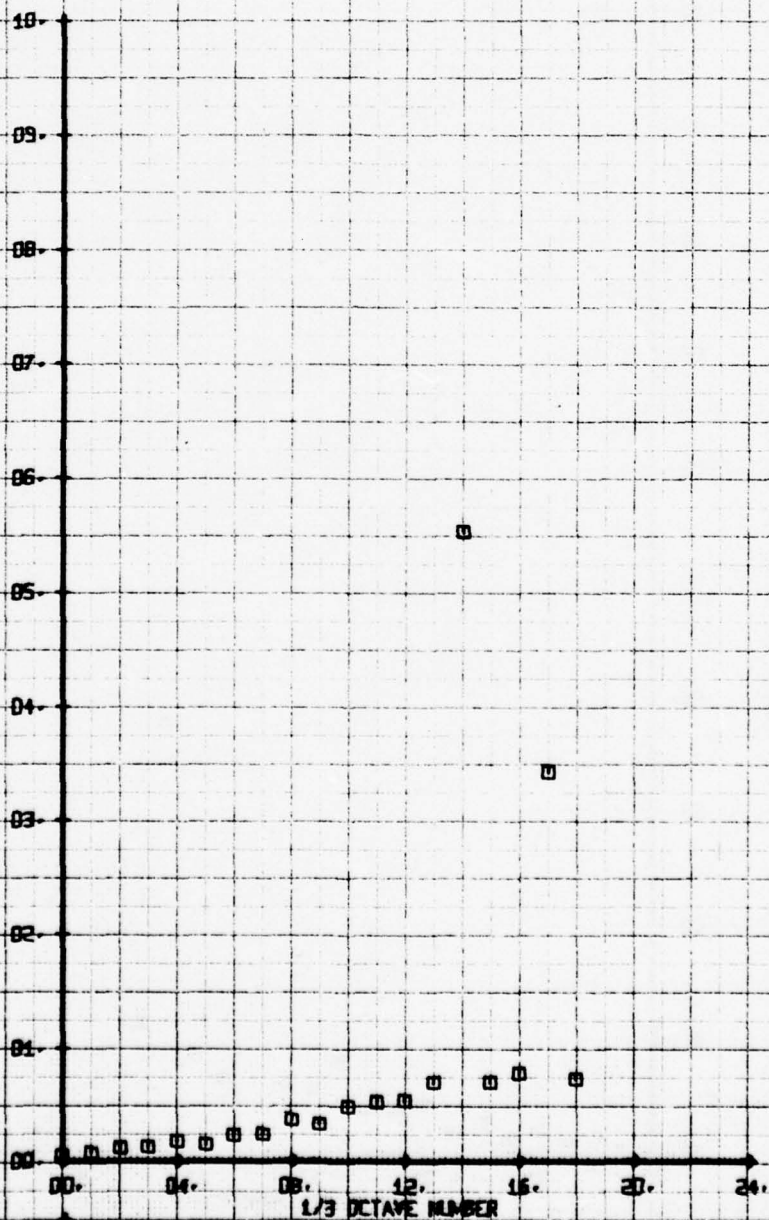
LEGEND
 CH 72
 PARAMETER
 VEL-2LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE AT 1/R C-L.
 RUN 111 TP 34

SYM	CH	PARAMETER
□	72	VEL-2LT

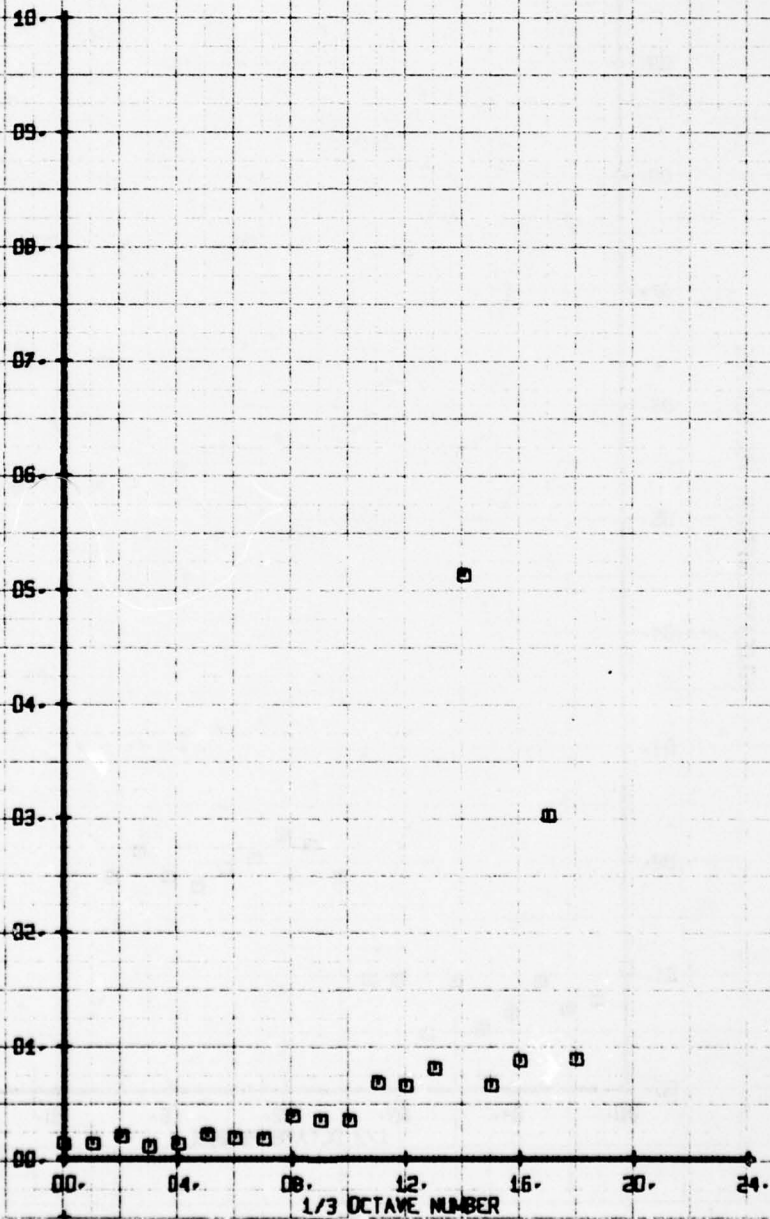
VELOCITY COMPONENT VEL-2LT FPS



NOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE AT T/R C-I.
 RUN 111 TP 36

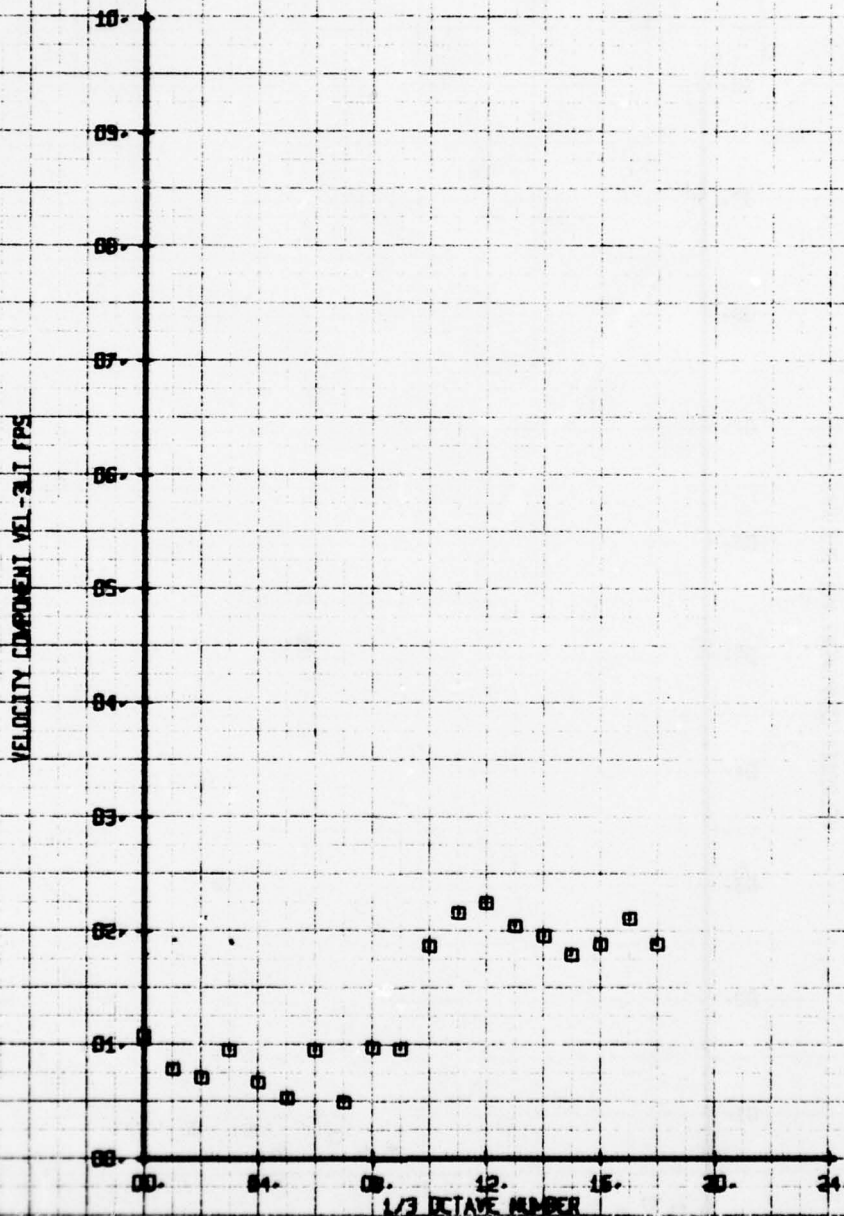
LEGEND		
SYM	CH	PARAMETER
□	72	VEL-2LT

VELOCITY COMPONENT VEL-2LT FPS



NOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE AT 1/R C.L.
 RUN 111 TP 20

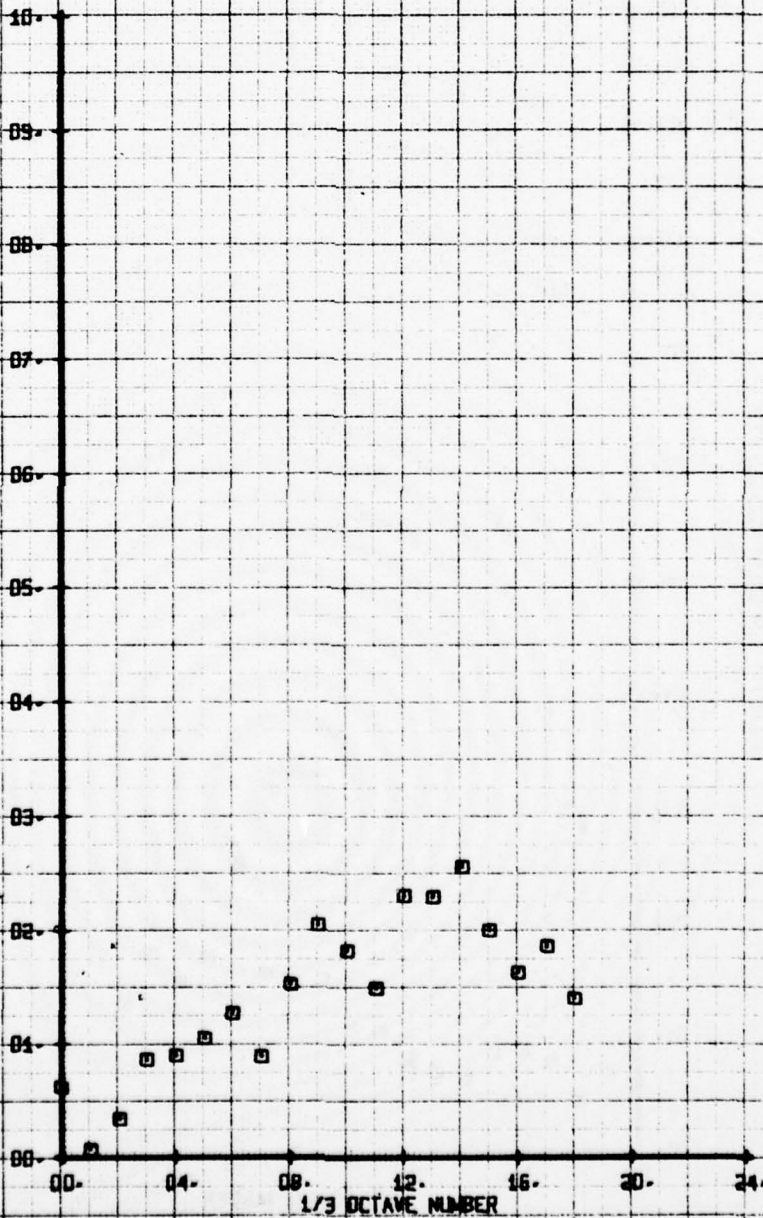
LEGEND
 CH 70
 PARAMETER
 VEL-3LT



HOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE COMET6, TRAVERSE AT 1/R C.I.
 RUN 141 TP 21

SYM	CH	PARAMETER
@	70	VEL-3LT

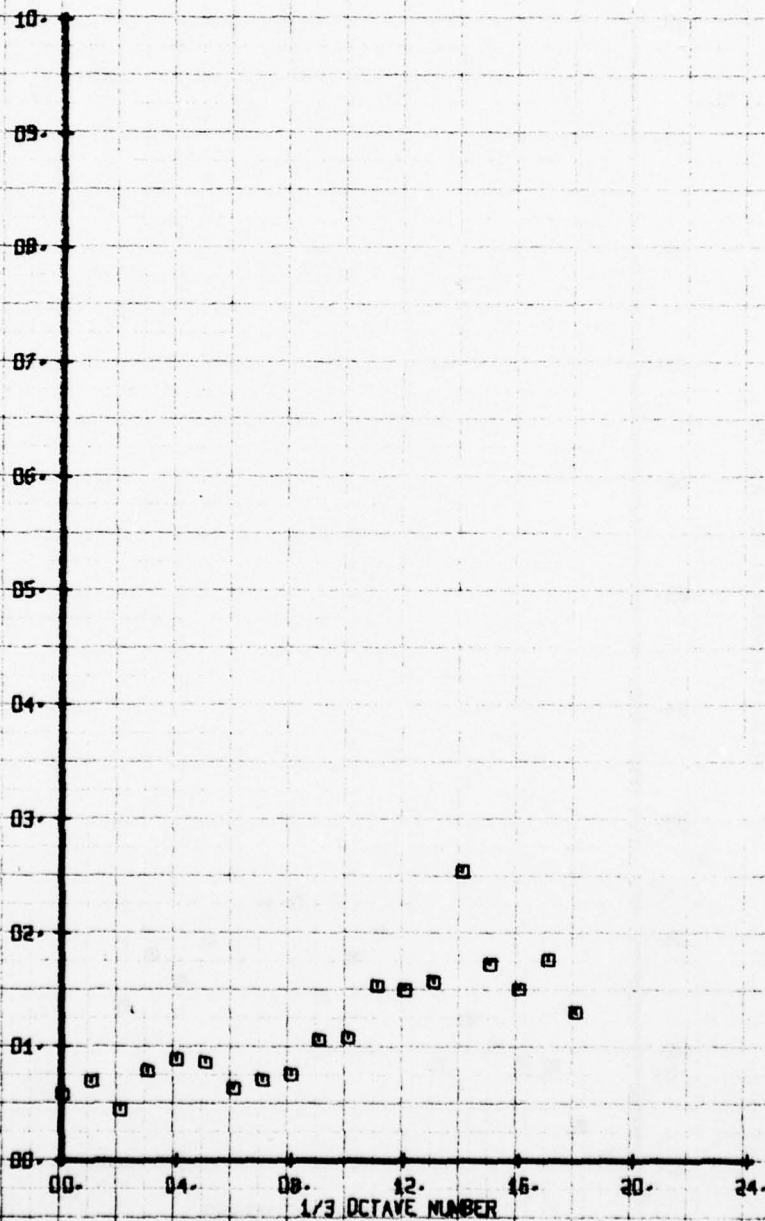
VELOCITY COMPONENT VEL-3 LT FPS



HOT FILM WARE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE AT T/R C-L
 RUN 111 TP 22

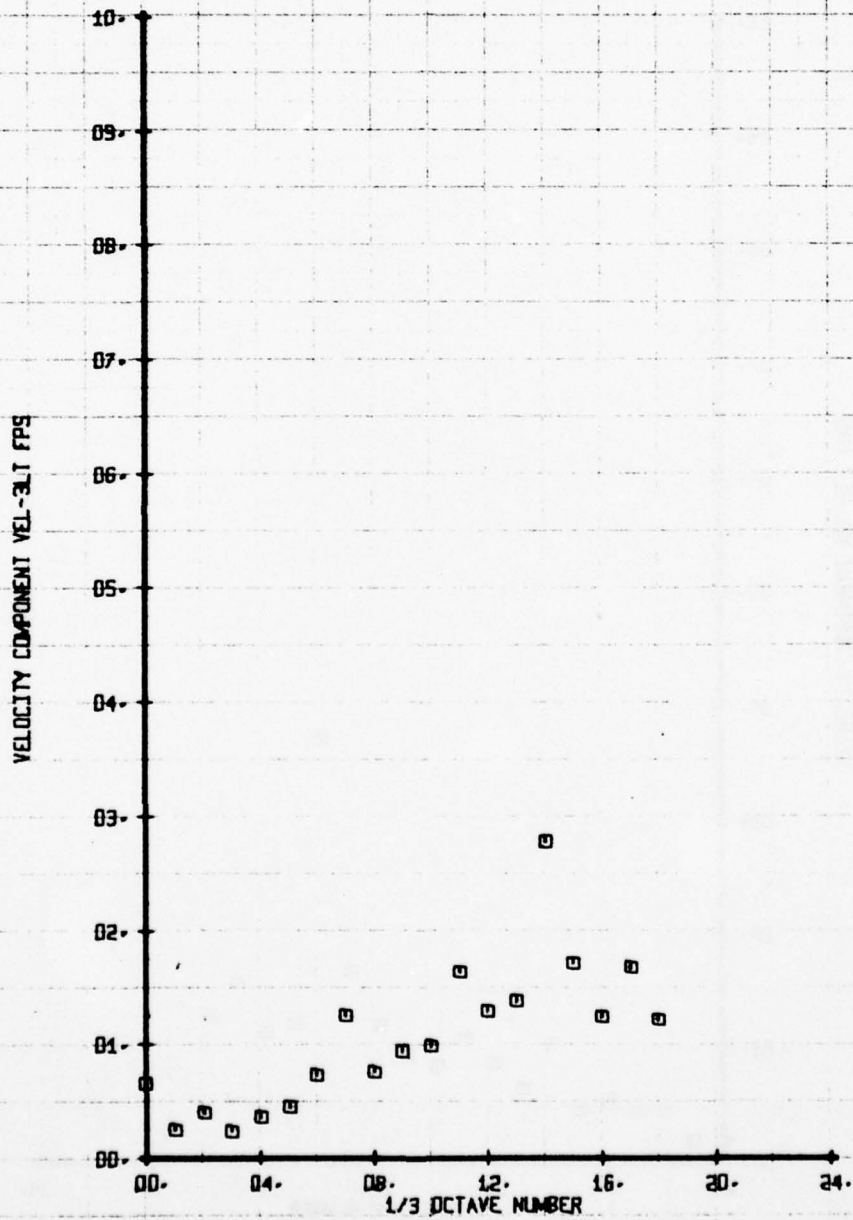
LEGEND	
SYM	PARAMETER
□	7D VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS



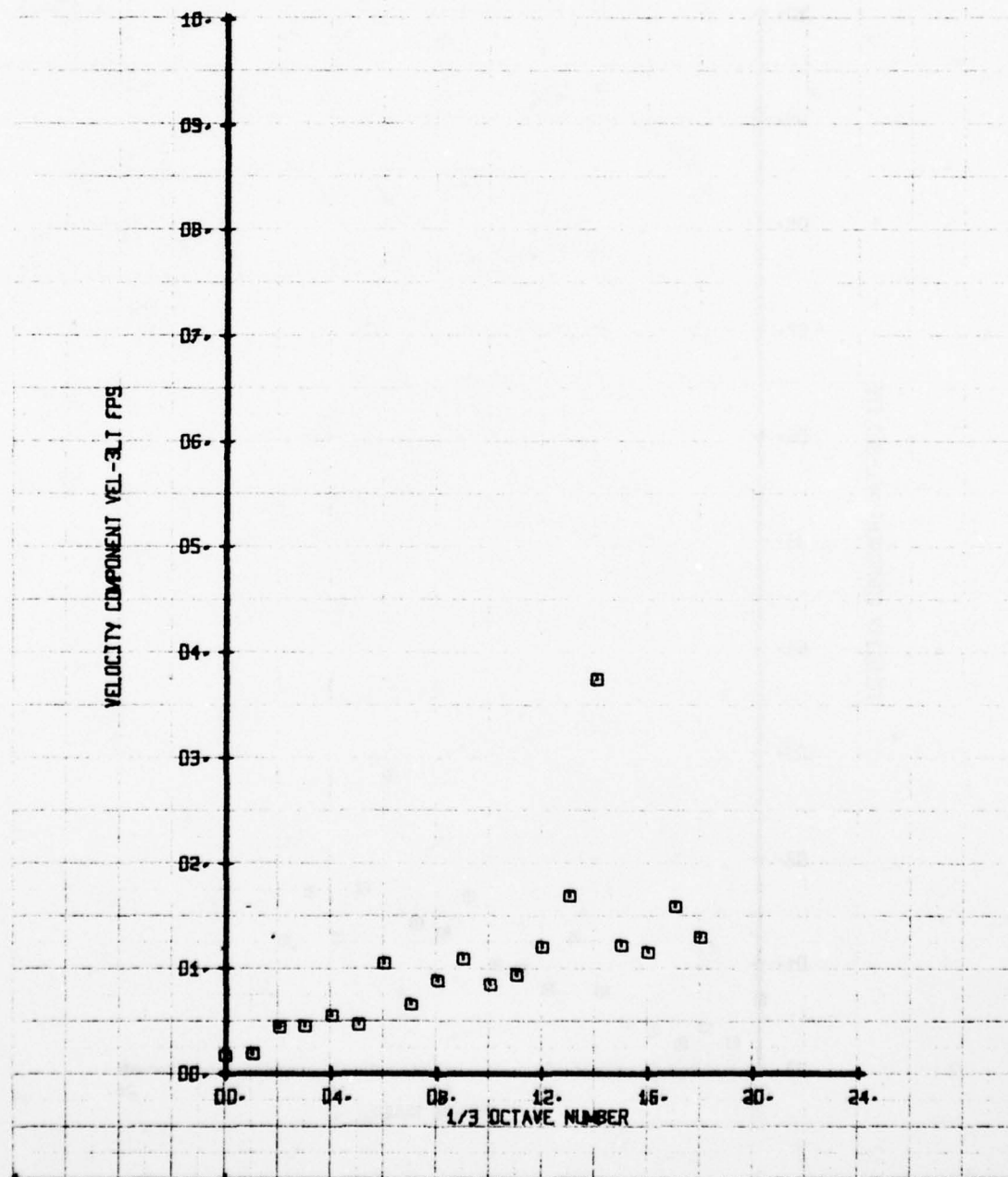
HOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE AT 1/2 R C-L.
 RUN 111 TP 24

SYN CH PARAMETER
 0 70 VEL-3LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE AT T/R C-L.
RUN 111 TP 25

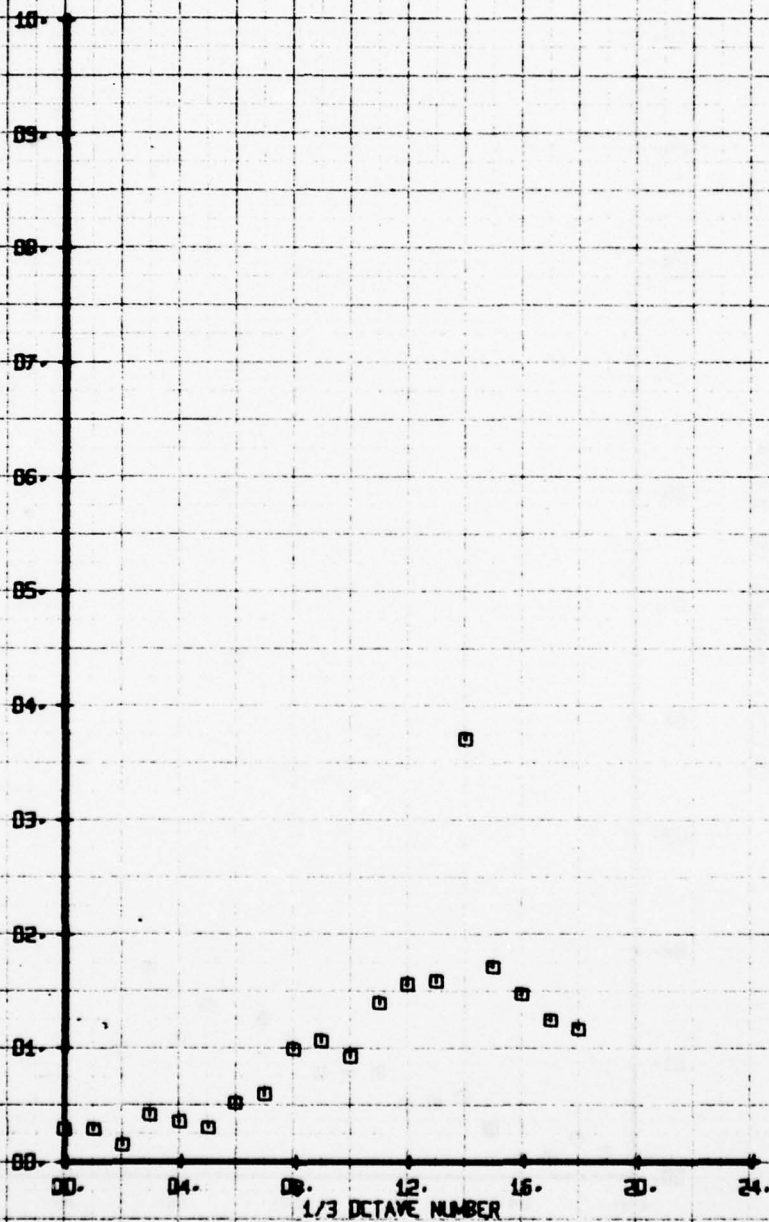
LEGEND		
SYM	CH	PARAMETER
□	70	VEL-3LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFG. TRAVERSE AT T/R C.L.
 RUN 111 TP 20

SYM	CH	PARAMETER
□	70	VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS



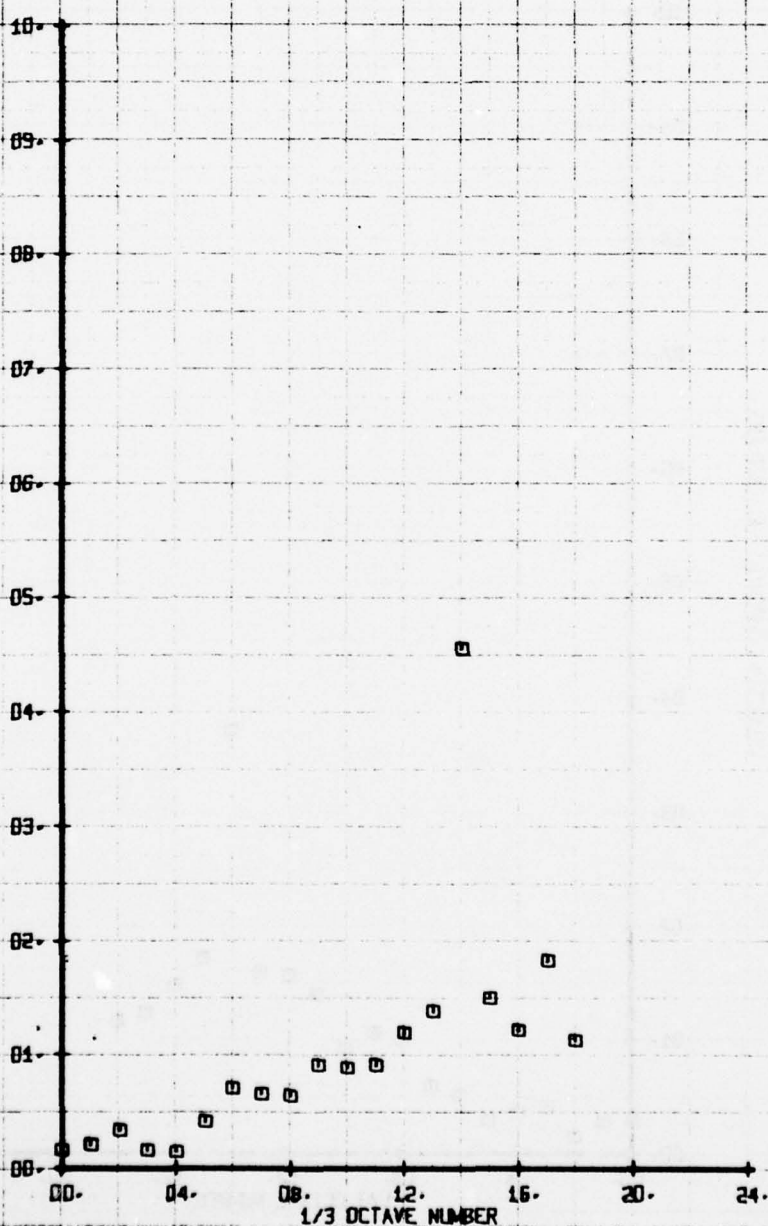
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE AT T/R C.L.
 RUN 111 TP 30

SYM
 □

CH
 70

LEGEND
 PARAMETER
 VEL-3LT

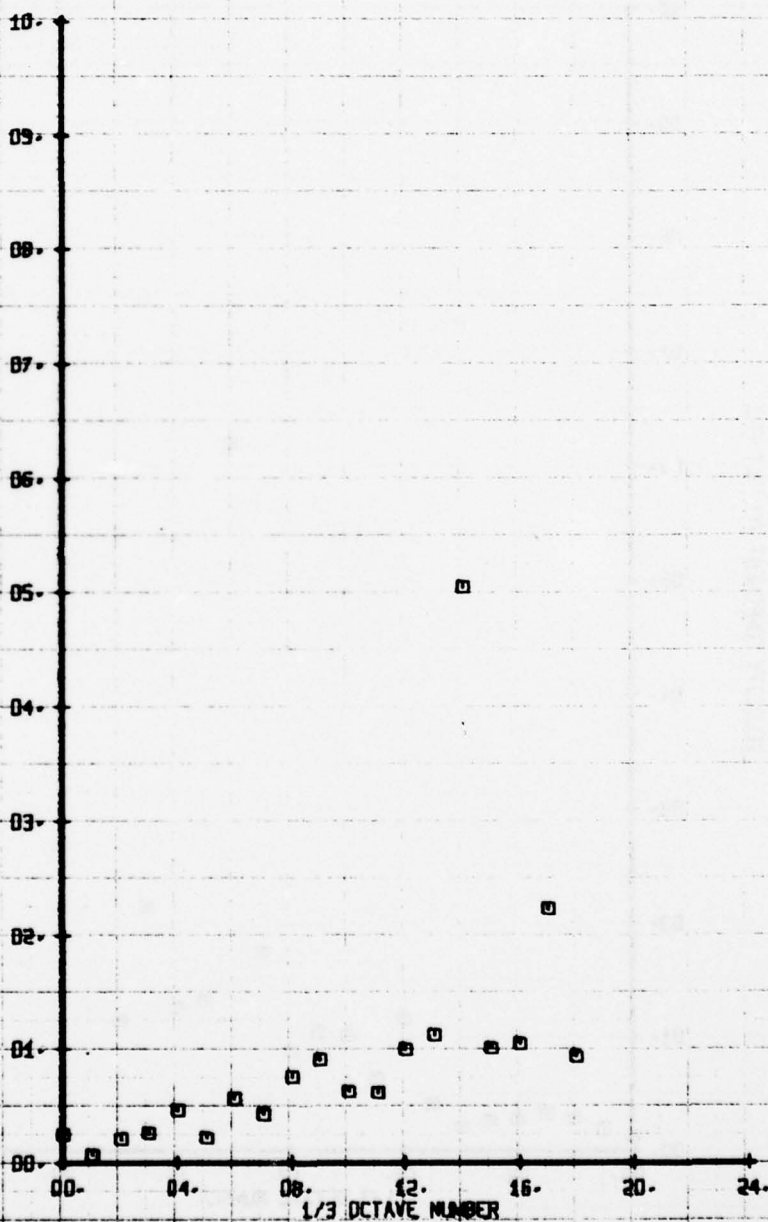
VELOCITY COMPONENT VEL-3LT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE AT 1/2 R C-L.
 RUN 111 TP 32

LEGEND
 SYM CH PARAMETER
 □ 70 VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS



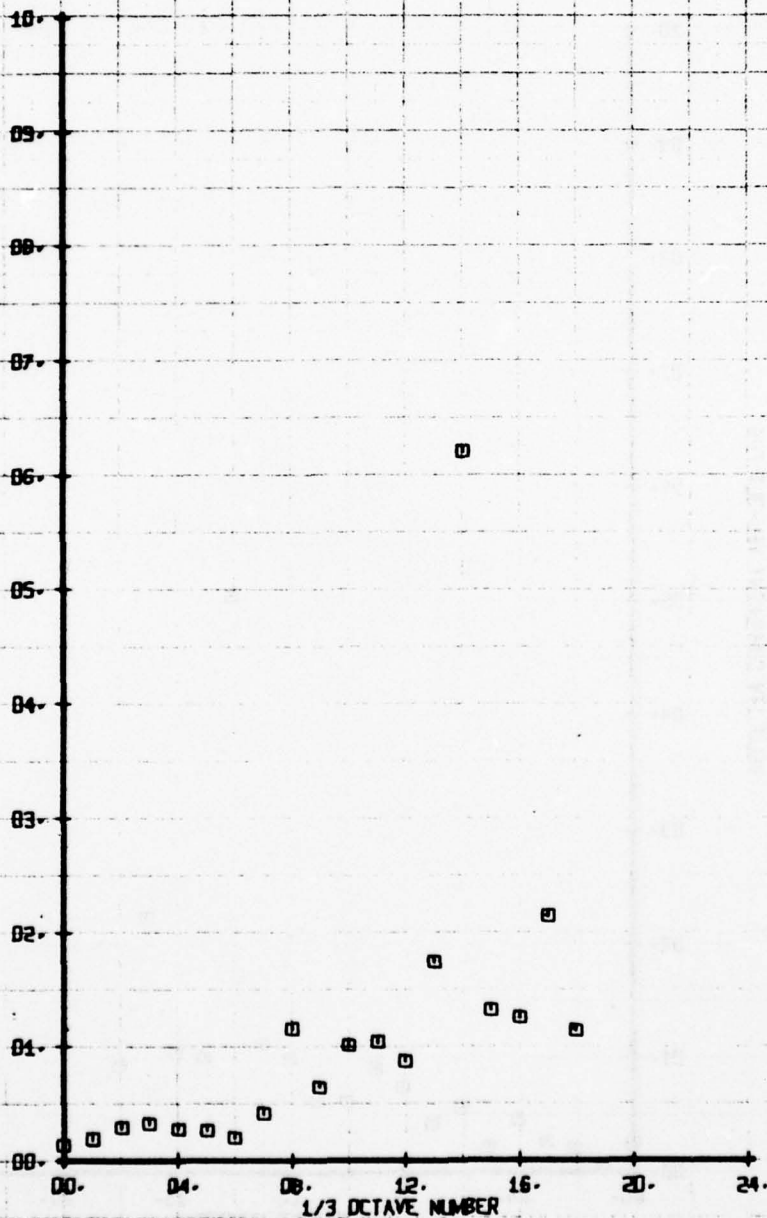
NOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRANSVERSE AT 1/R C.L.
 RUN 111 TP 34

SYM
 □

CH
 70

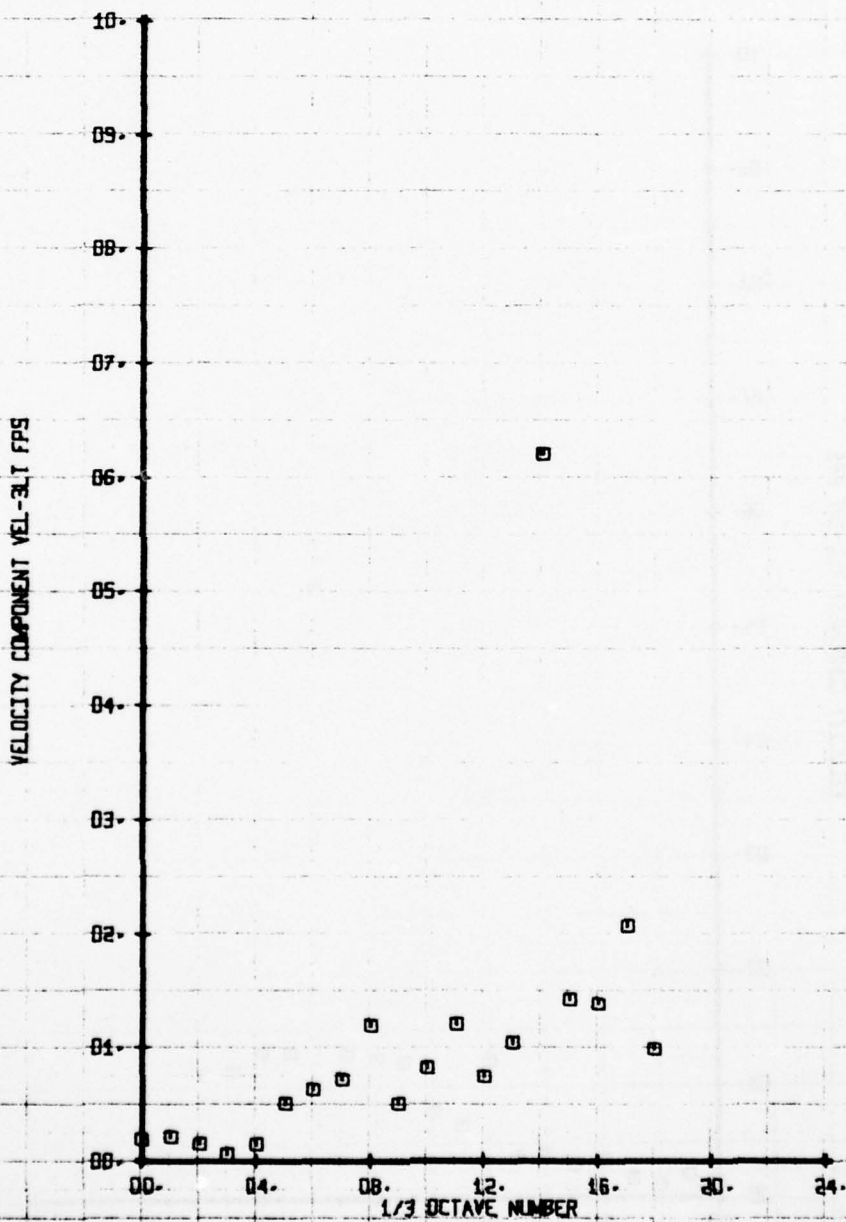
LEGEND
 PARAMETER
 VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE AT T/R C.L.
 RUN 111 TP 36

LEGEND
 CH 70
 PARAMETER
 VEL-3LT

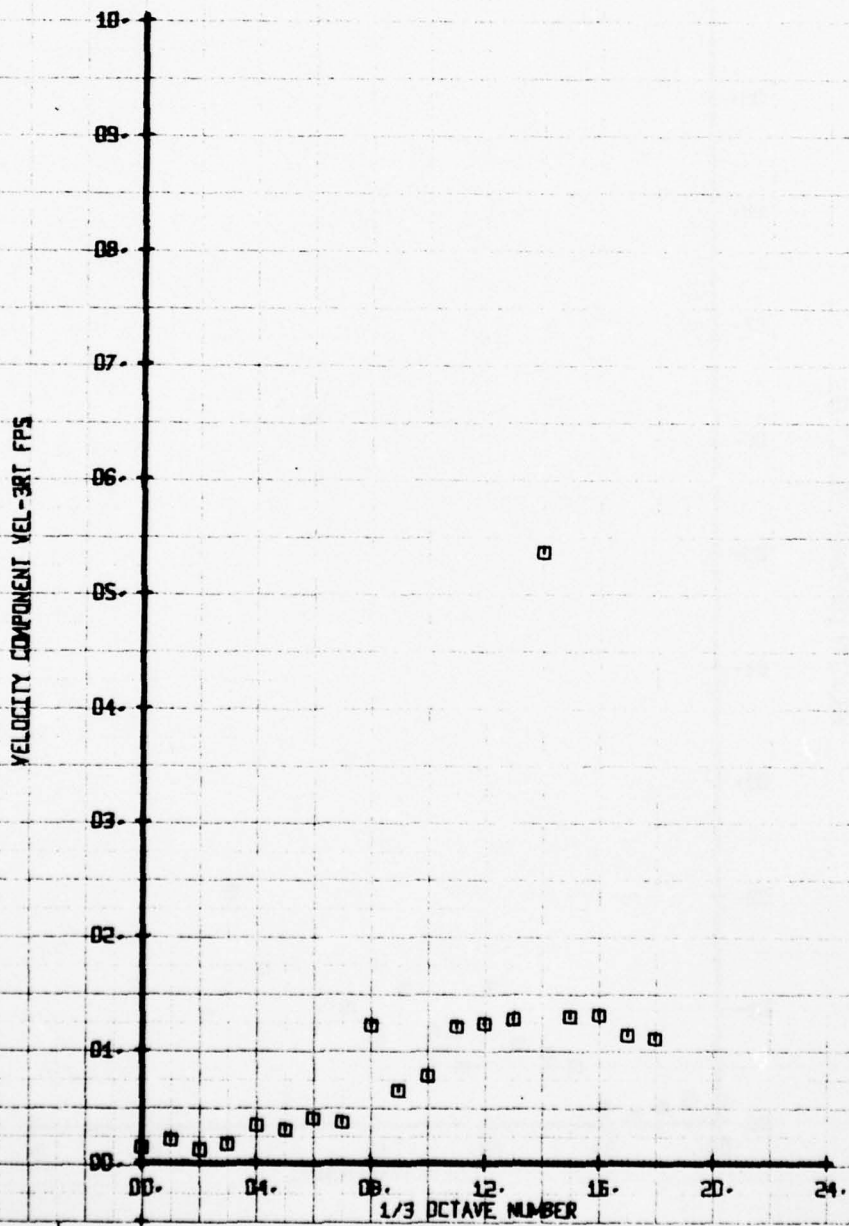


91

SET 1
 BWVT 169

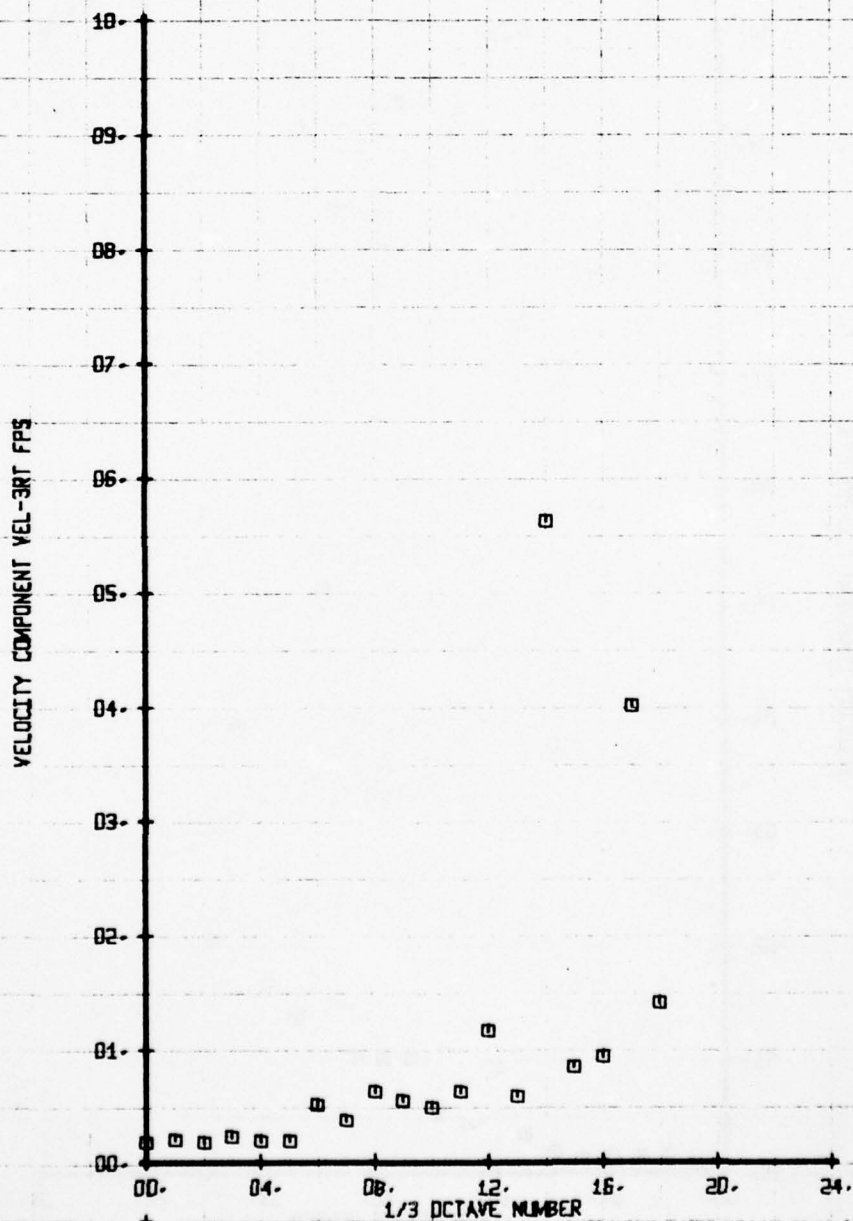
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE 1/R C-L.
 RUN 112 TP 2

SYM	CH	PARAMETER
□	71	VEL-3RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C.L.
 RUN 112 TP 4

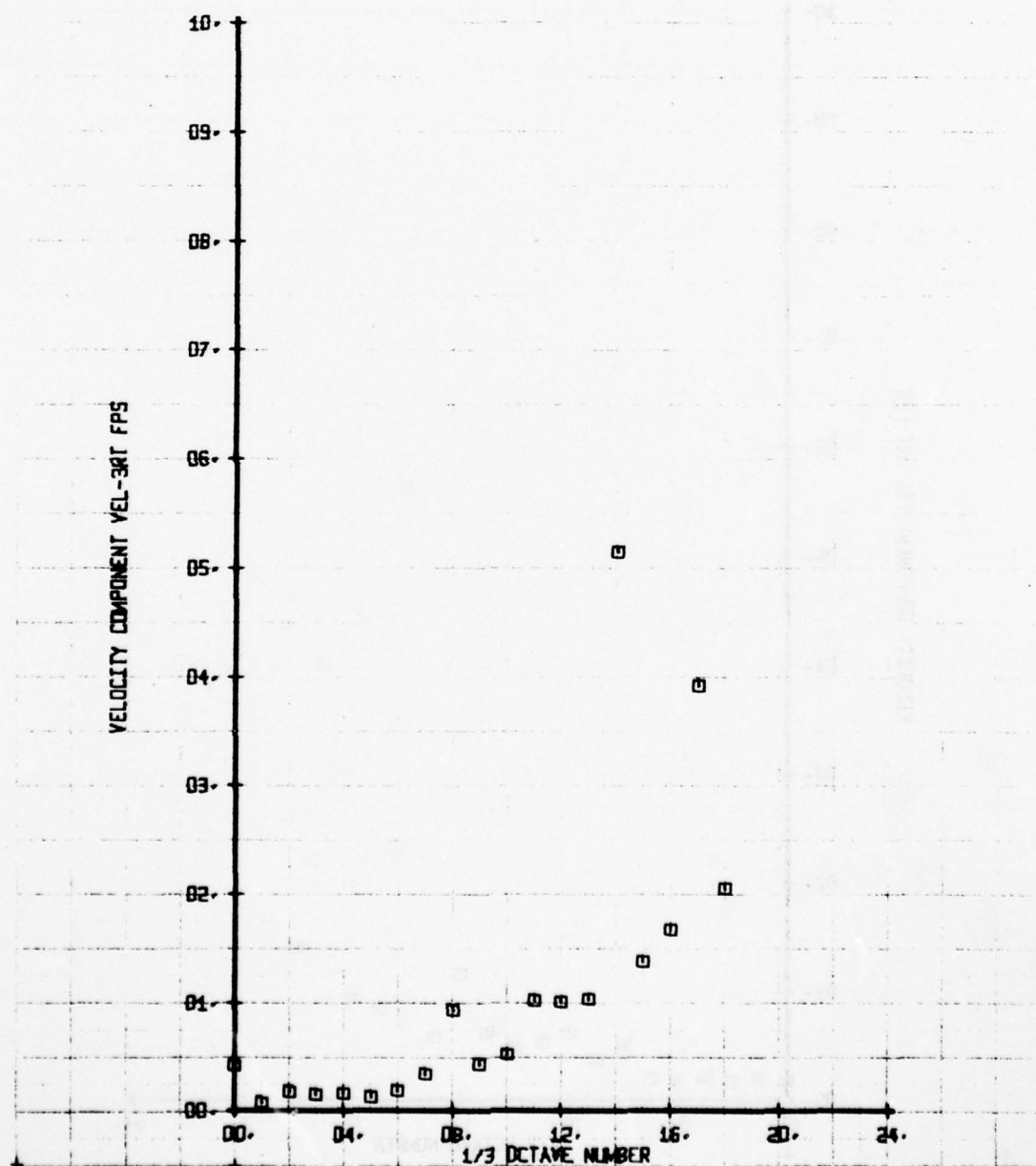
SYM	CH	PARAMETER
□	71	VEL-3RT



ET 2
 WT 169

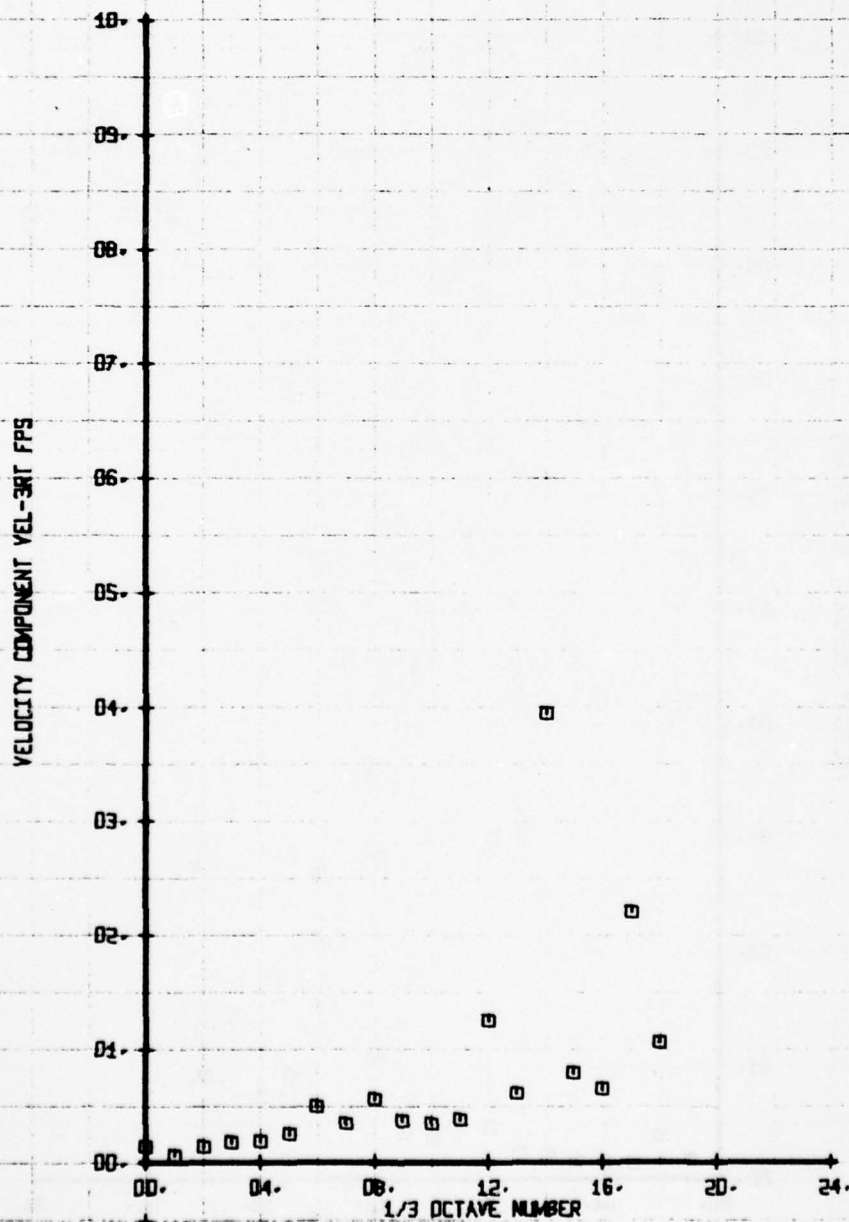
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C-L.
 RUN 112 TP 6

LEGEND		
SYM	CH	PARAMETER
□	71	VEL-3RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C.L.
 RUN 112 TP B

SYM	CH	PARAMETER
□	71	VEL-3RT



AD-A061 861

BOEING VERTOL CO PHILADELPHIA PA
INTERACTIONAL AERODYNAMICS OF THE SINGLE ROTOR HELICOPTER CONF--ETC(U)
SEP 78 P F SHERIDAN

F/G 1/3

DAAJ02-77-C-0020

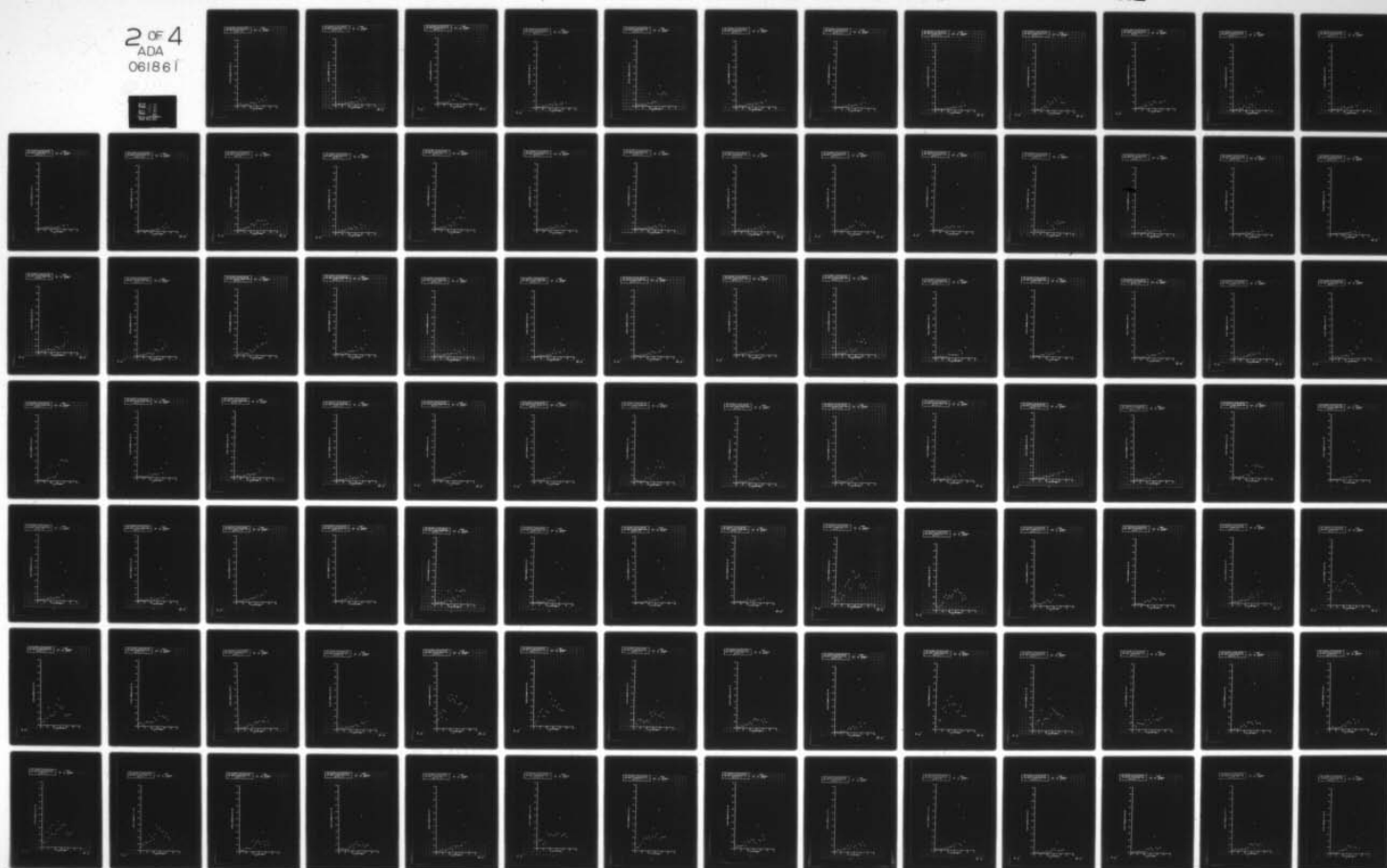
UNCLASSIFIED

USARTL-TR-78-23F

NL

2 OF 4
ADA
061861

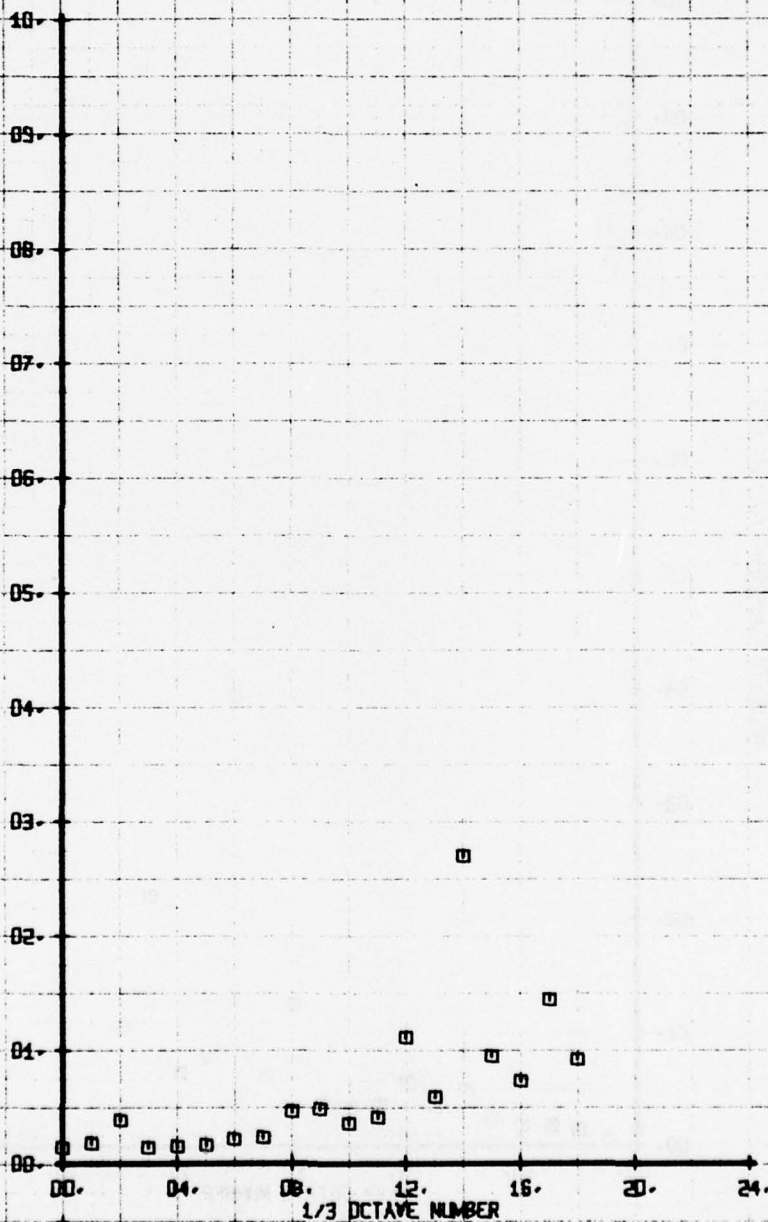
SIZE
1/2



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C.L.
 RUN 112 TP 10

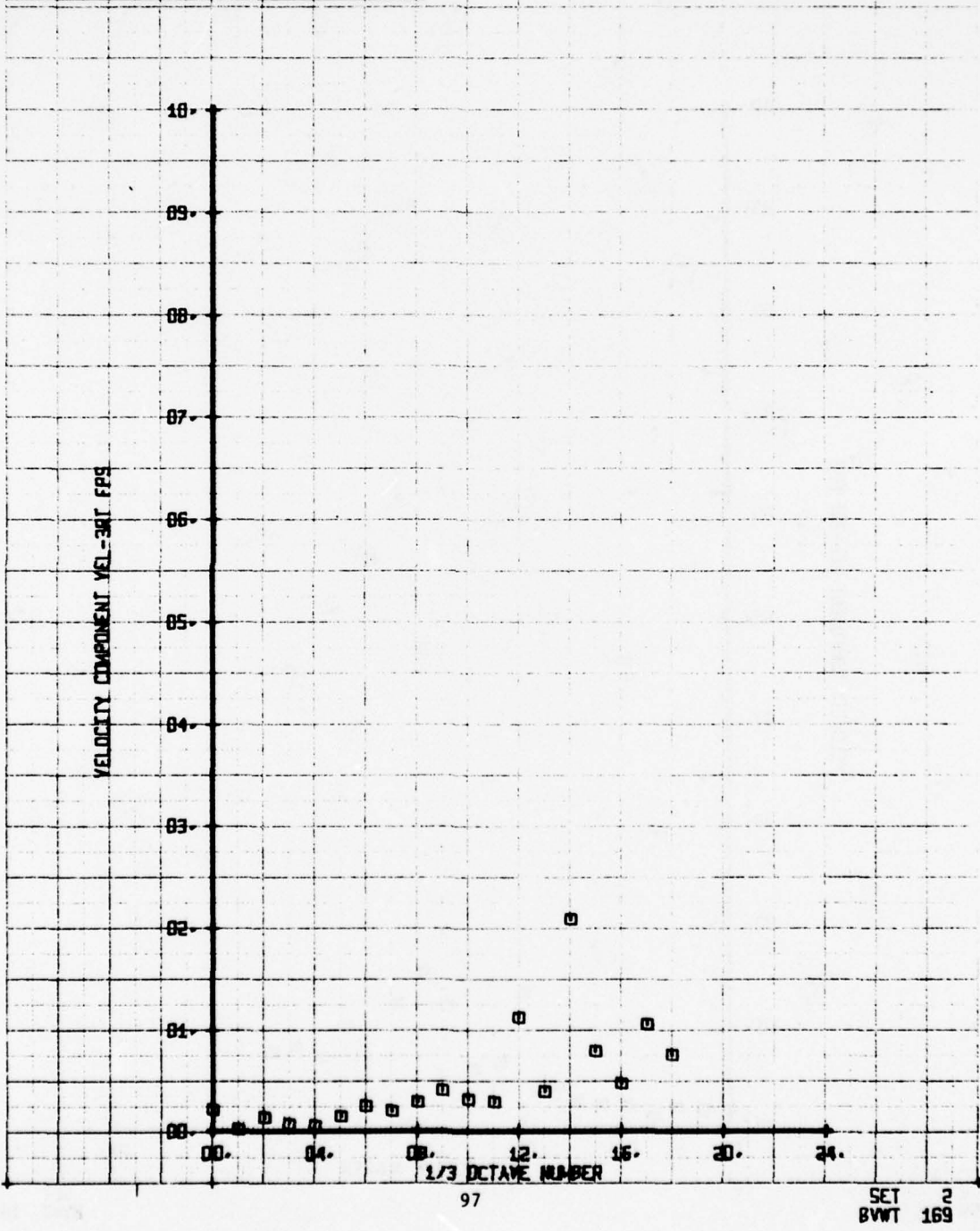
SYM	CH	LEGEND	PARAMETER
0	71		VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS



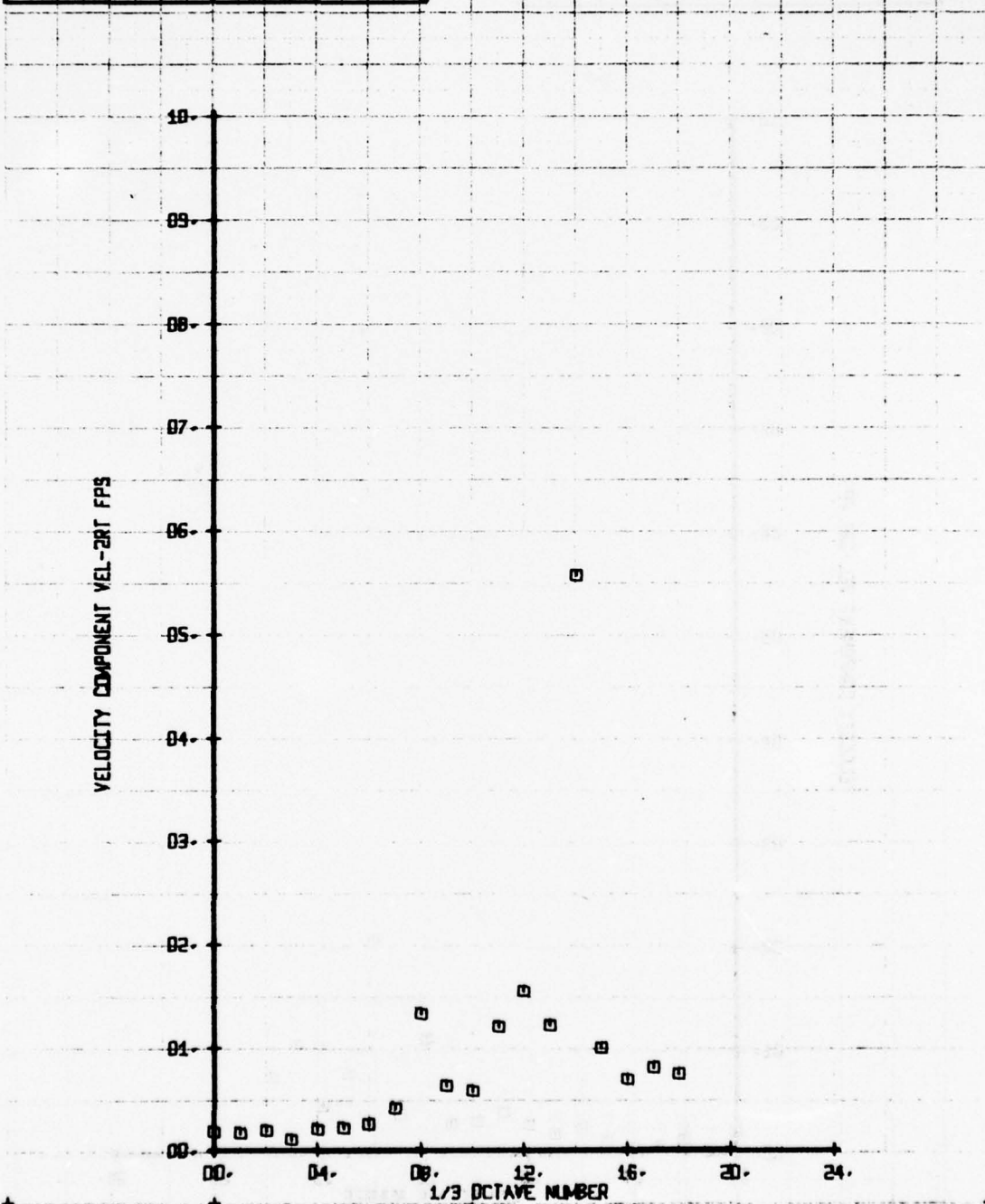
HOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C-L.
 RUN 112 TP 12

SYM	CH	PARAMETER
□	71	VEL-3RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONE TG. TRAVERSE ABOVE T/R C-1.
 RUN 112 TP 2

SYM	CH	LEGEND	PARAMETER
□	75	VEL-2RT	



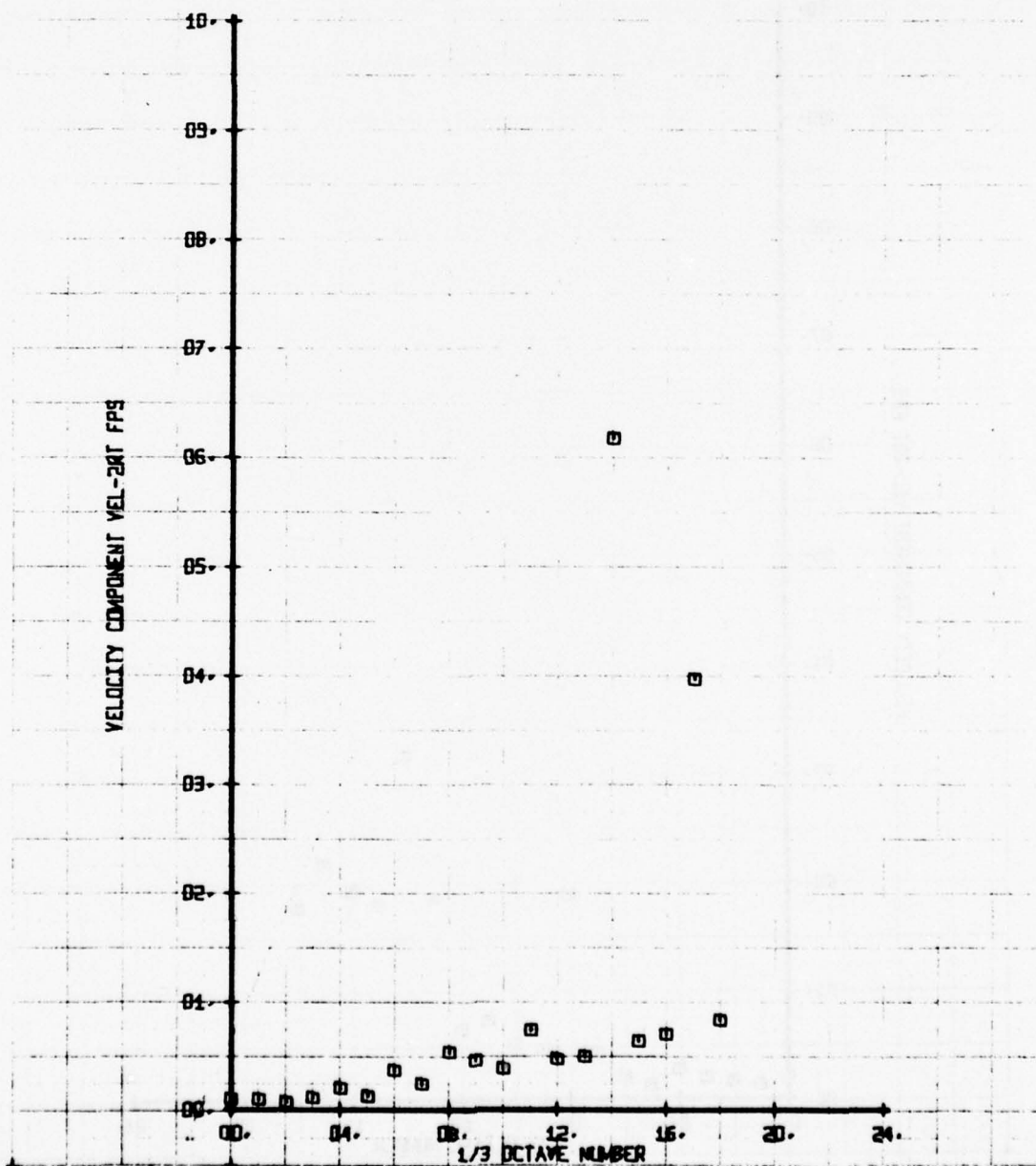
ET 2
 WT 169

98

SET 2
 BWVT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C-L.
 RUN 112 TP 4

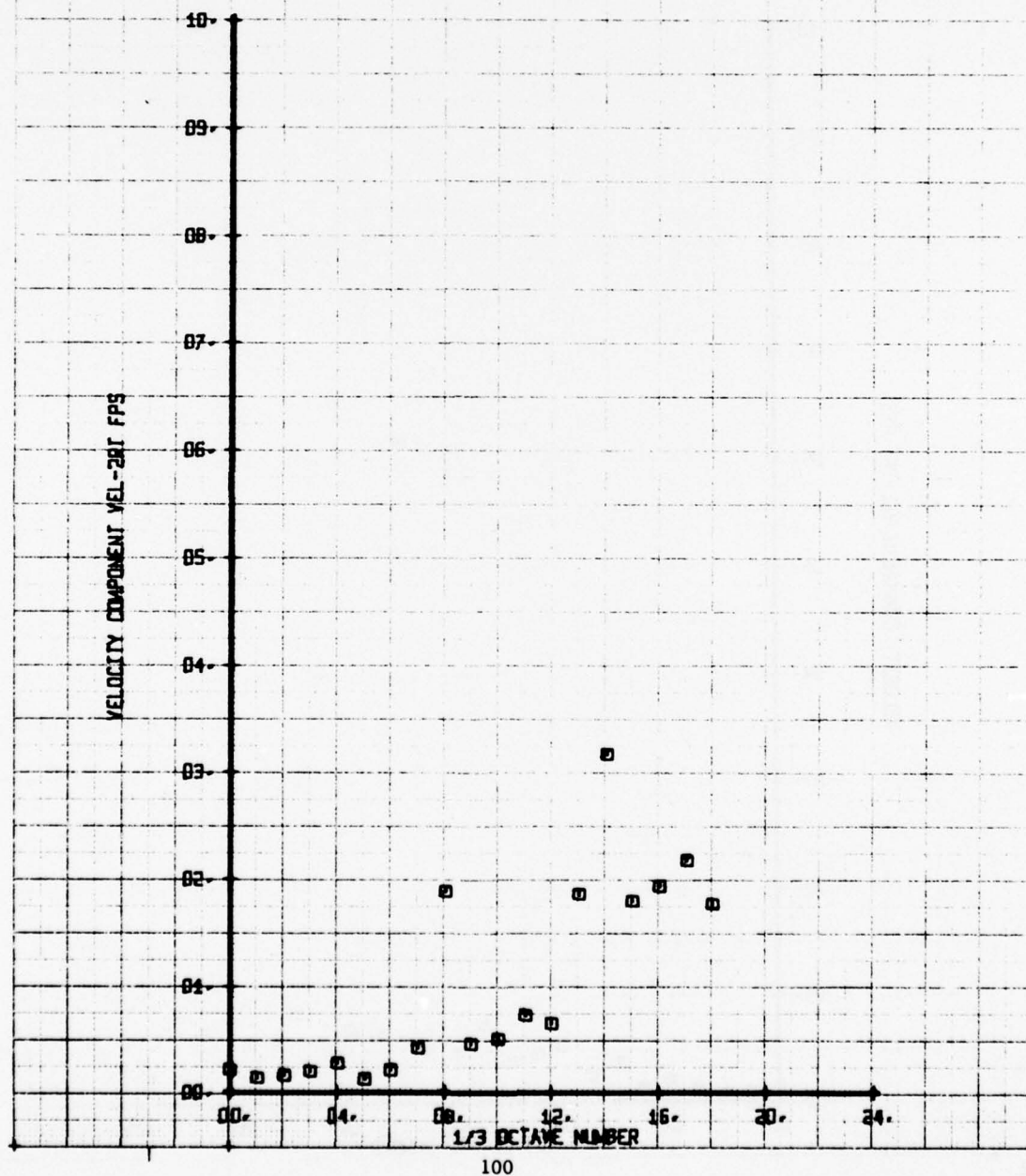
LEGEND
 SYM CH PARAMETER
 □ 75 VEL-2RT



ET 2
 WT 169

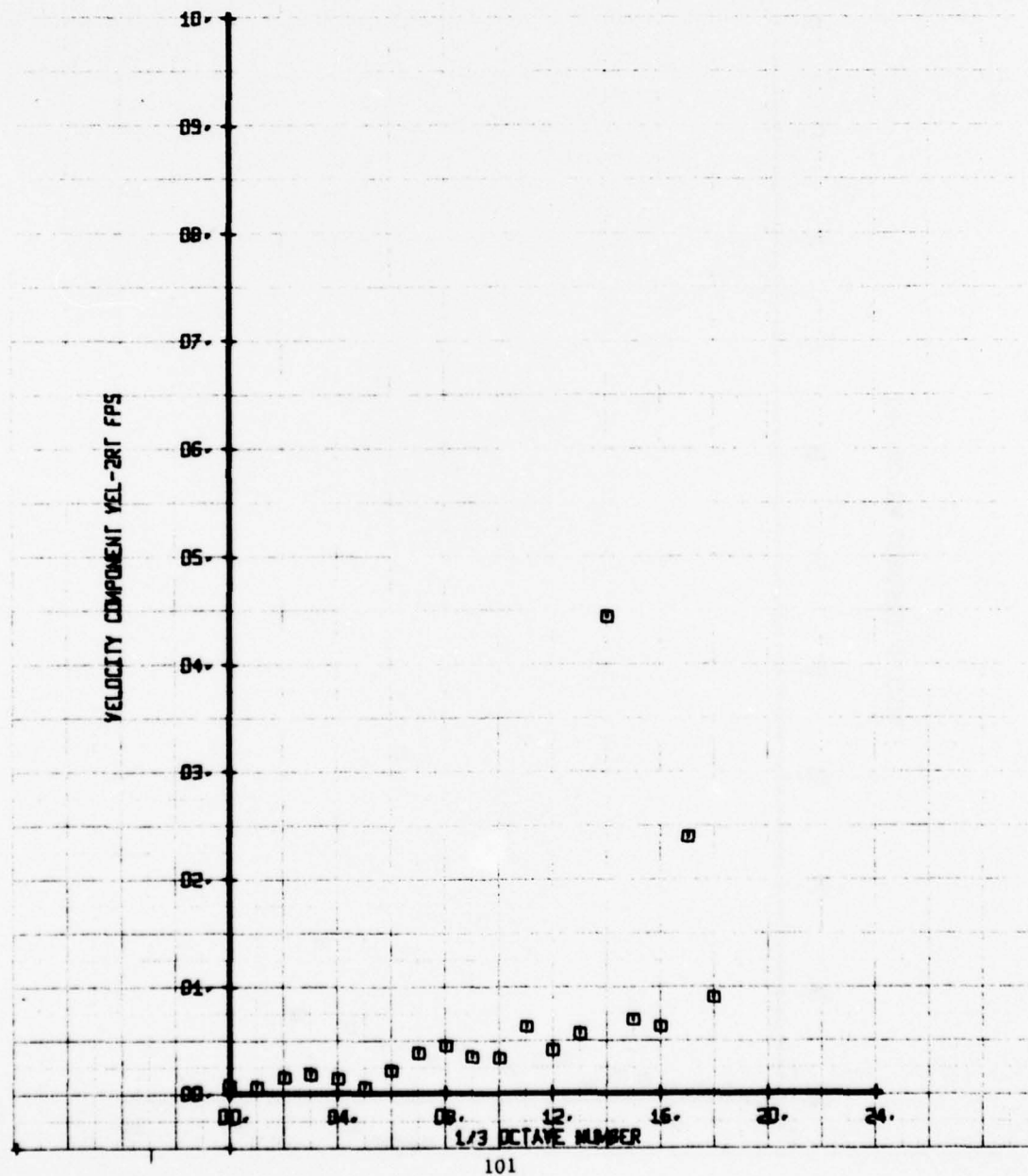
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C.L.
 RUN 112 TP 6

LEGEND
 CH 75
 PARAMETER
 VEL-2RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE ABOVE T/R C.L.
RUN 112 TP B

LEGEND
SYM CH PARAMETER
□ 75 VEL-2RT



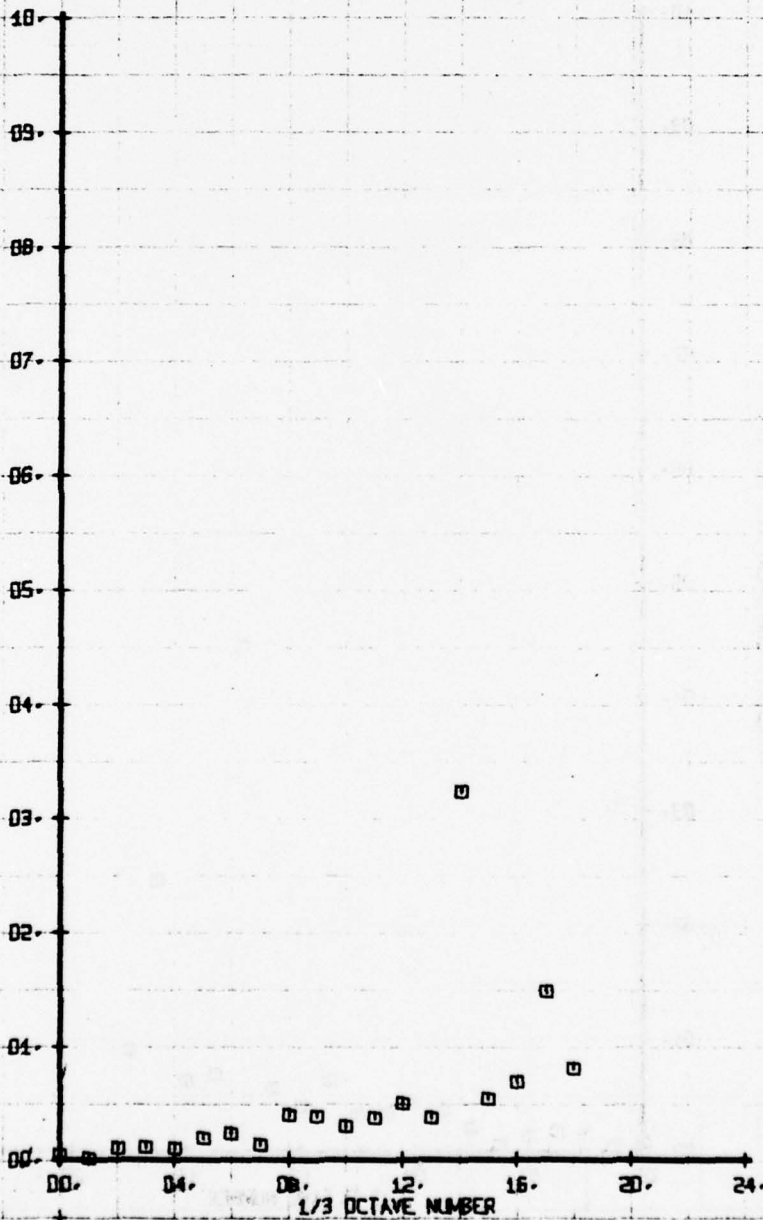
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C.L.
 RUN 112 TP 10

SYM
 □

CH
 75

LEGEND
 PARAMETER
 VEL-2RT

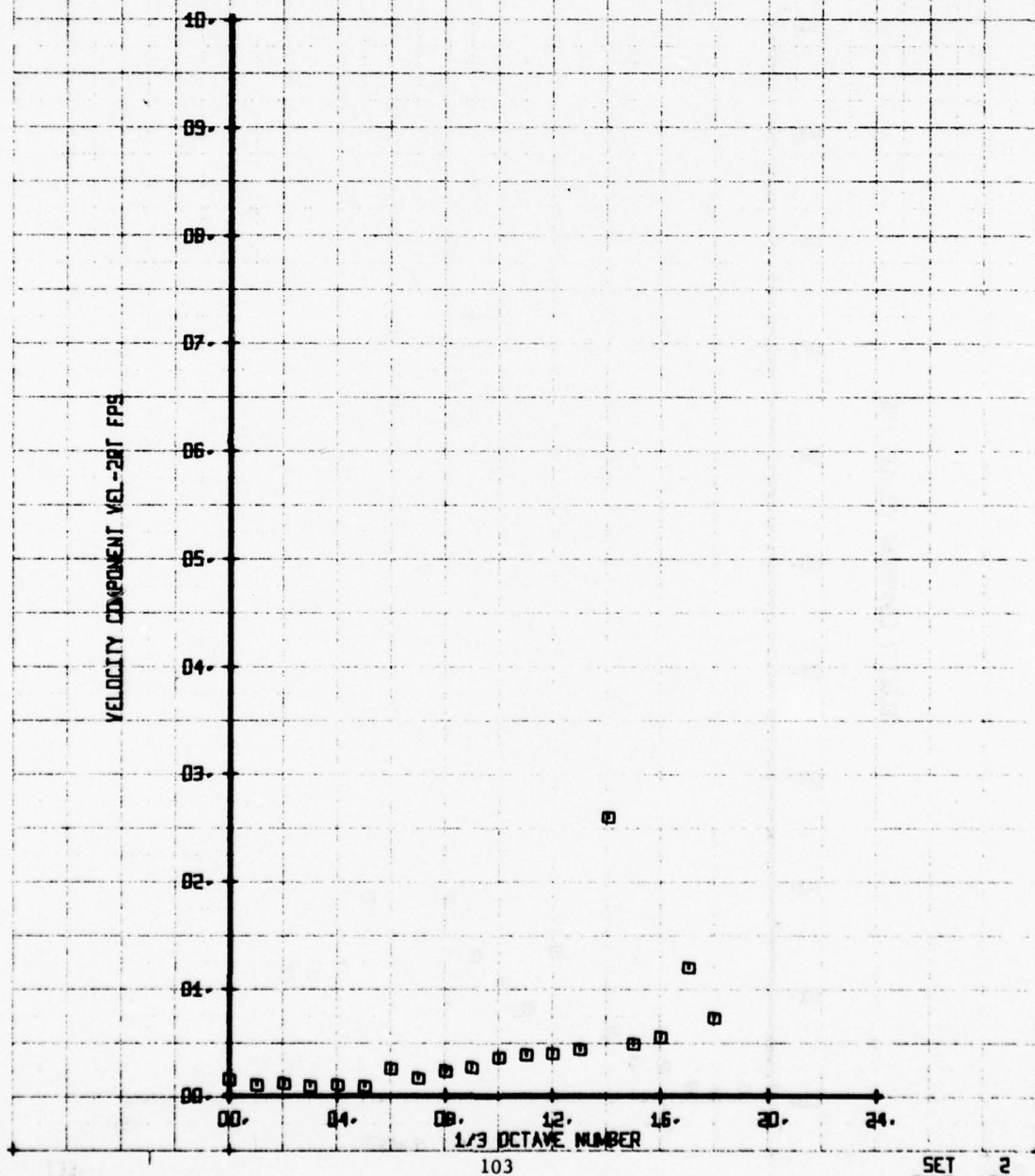
VELOCITY COMPONENT VEL-2RT FPS



HOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C.L.
 RUN 142 TP 12

SYM CH PARAMETER
 0 75 VEL-2RT

VELOCITY COMPONENT VEL-2RT FPS

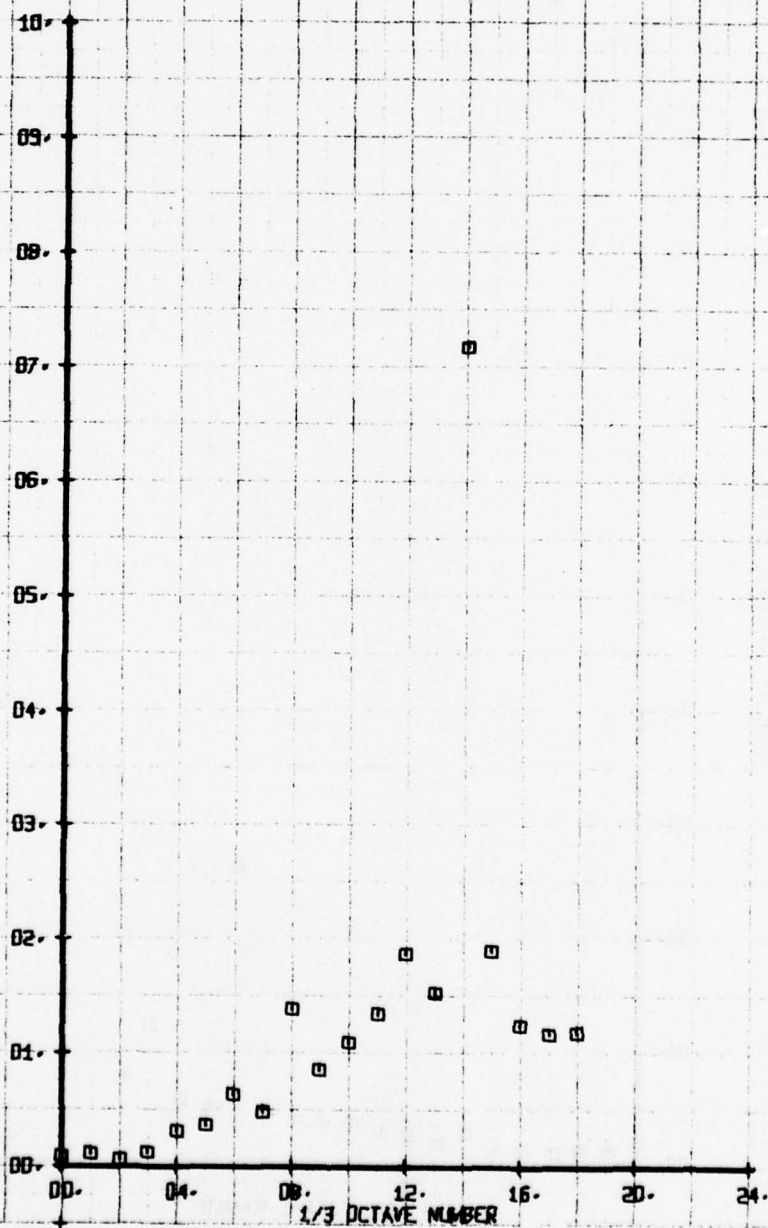


SET 2
 BWWT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C.L.
 RUN 112 TP 2

LEGEND
 CH 74
 PARAMETER
 VEL-1RT

VELOCITY COMPONENT VEL-1RT FPS



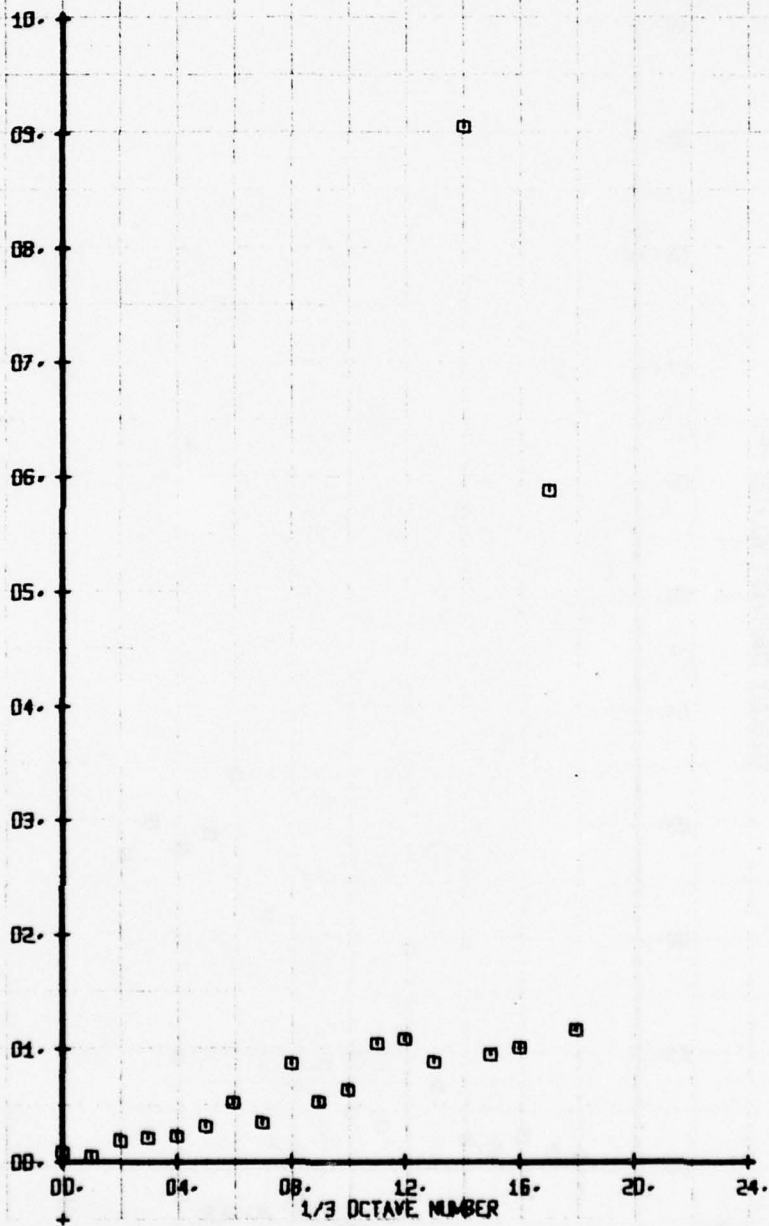
ET 2
 WT 169

SET 2
 BVWT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C-L.
 RUN 112 TP 4

SYN CH PARAMETER
 □ 74 VEL-1RT

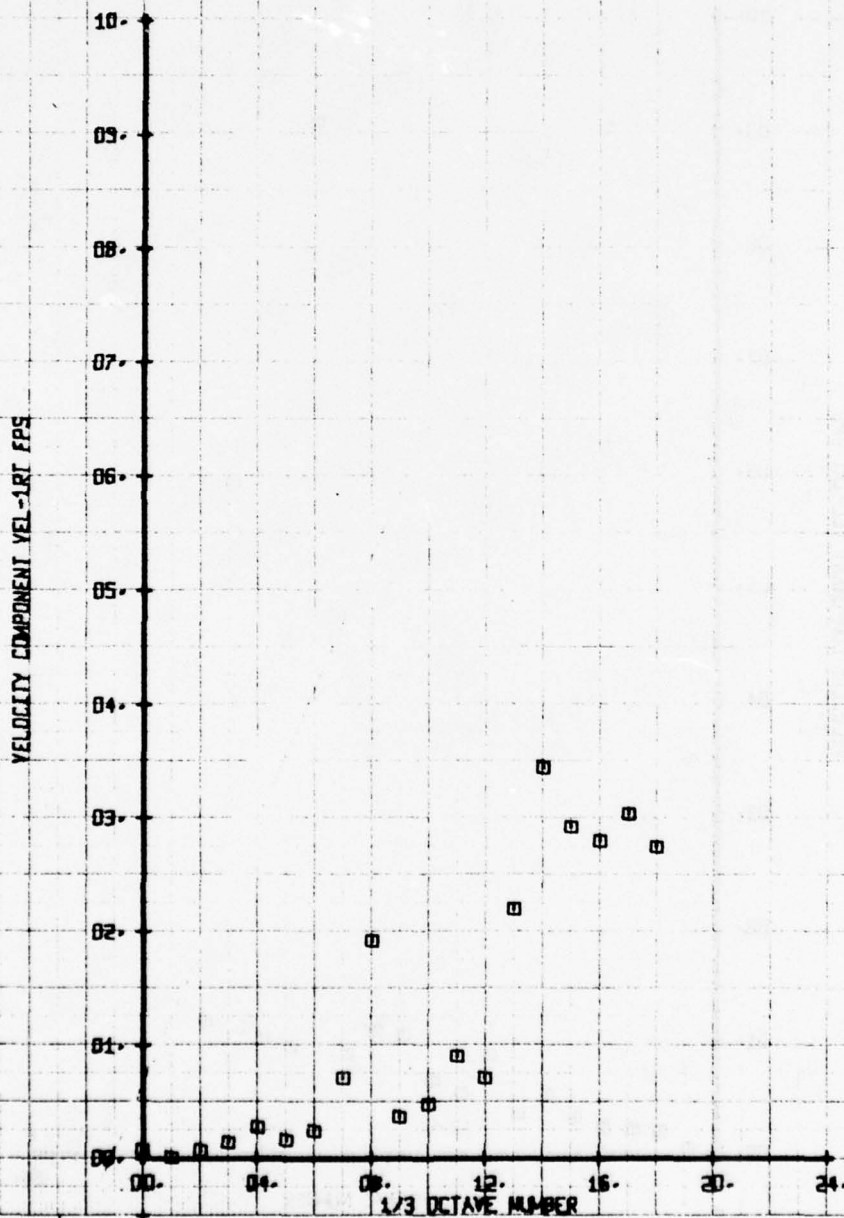
VELOCITY COMPONENT VEL-1RT FPS



ET 2
 WT 169

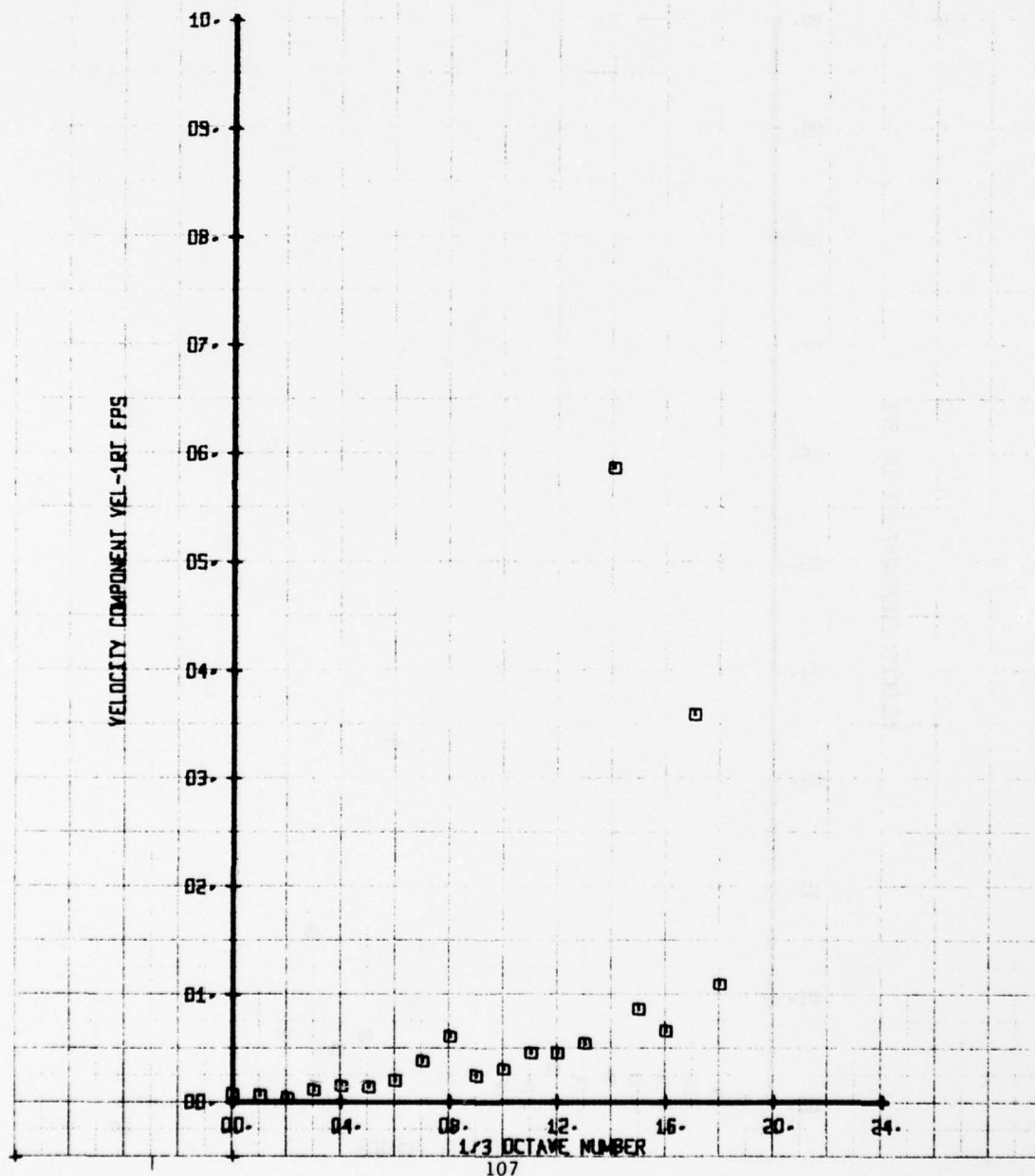
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE ABOVE T/R C-L.
RUN 112 TP 6

LEGEND
SYM CH PARAMETER
□ 74 VEL-1RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C-L-
 RUN 112 TP B

SYM	CH	PARAMETER
□	74	VEL-1RT



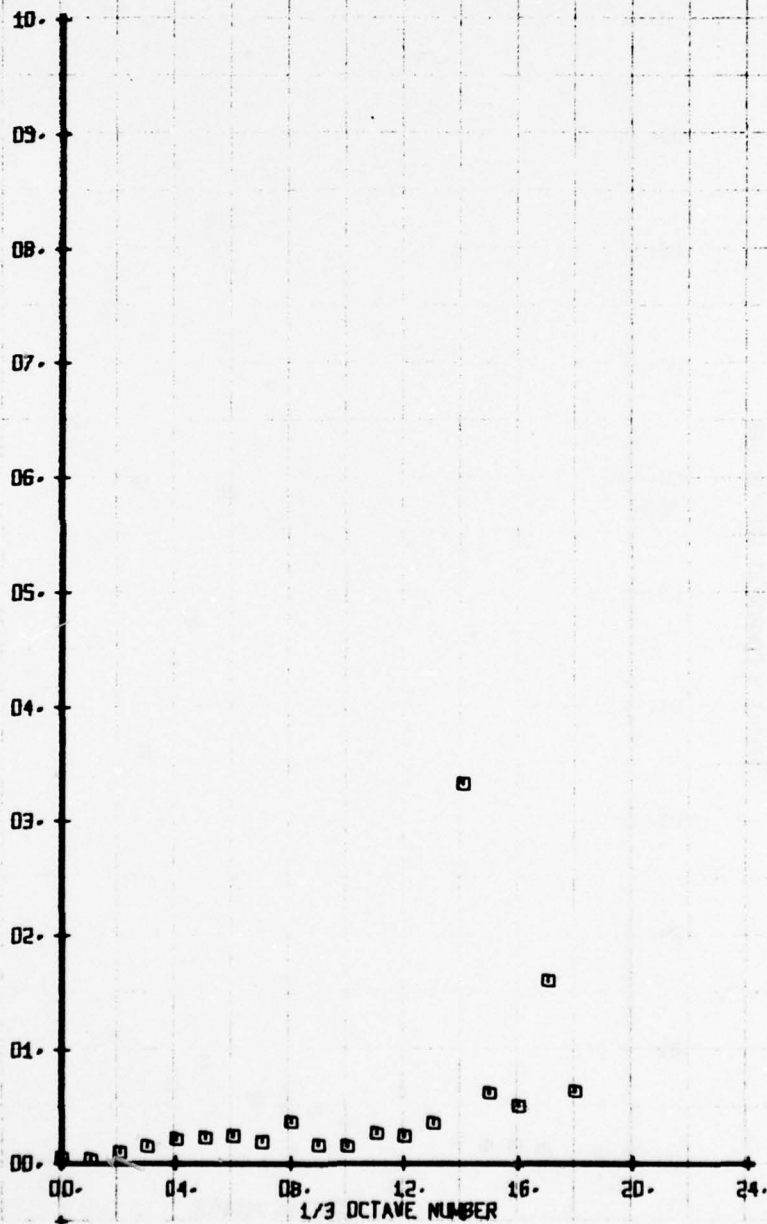
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C-L.
 RUN 112 TP 10

SYM
 0

CH
 74

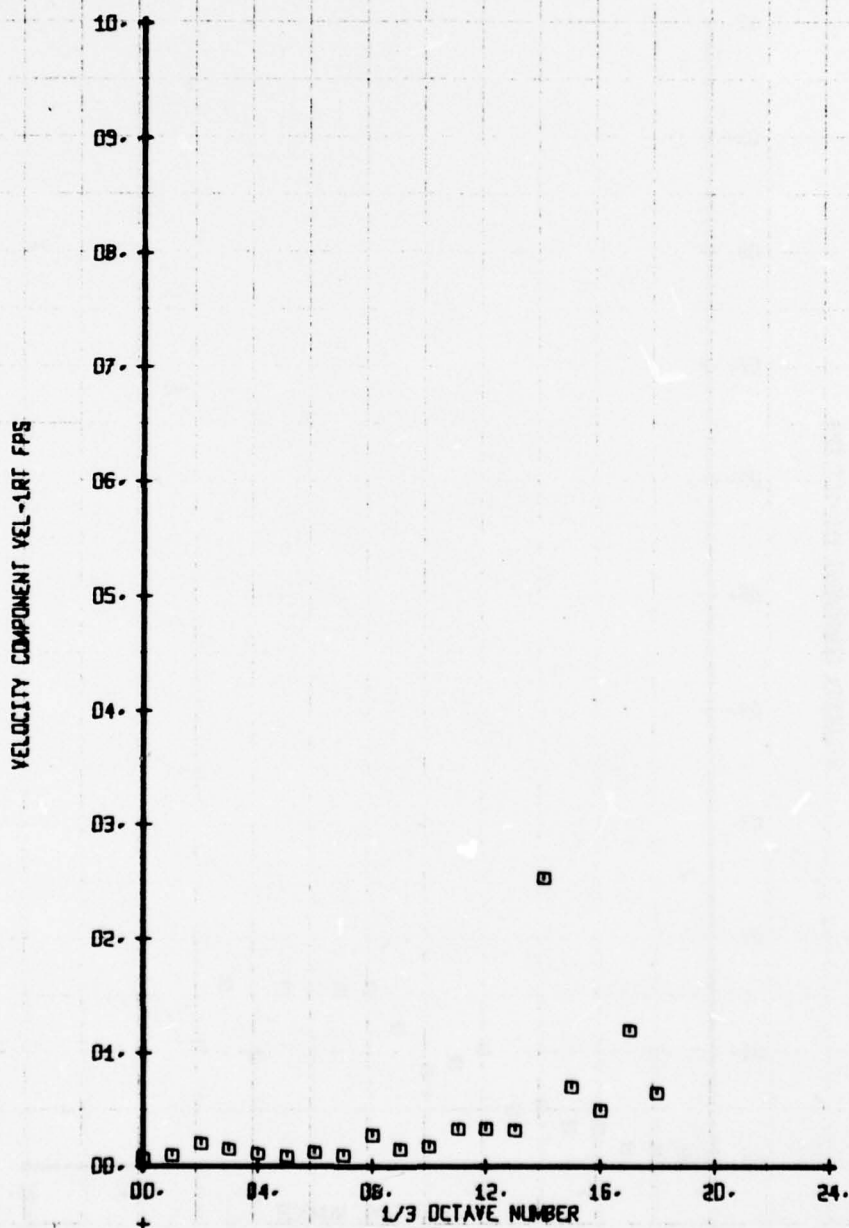
LEGEND
 PARAMETER
 VEL-1RT

VELOCITY COMPONENT VEL-1RT FPS



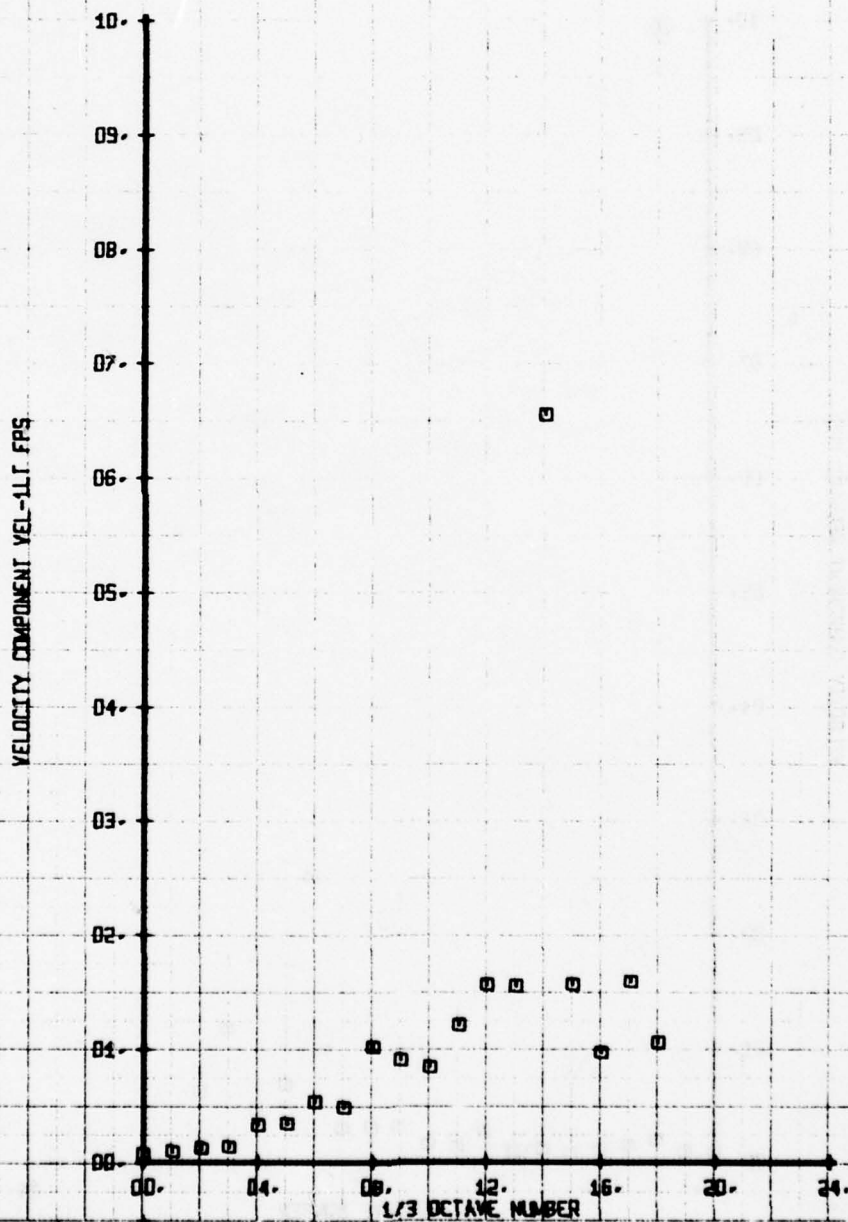
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C.L.
 RUN 112 TP 12

LEGEND
 SYM CH PARAMETER
 □ 74 VEL-1RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C.L.
 RUN 112 TP 2

SYM CH PARAMETER
 0 73 VEL-1LT

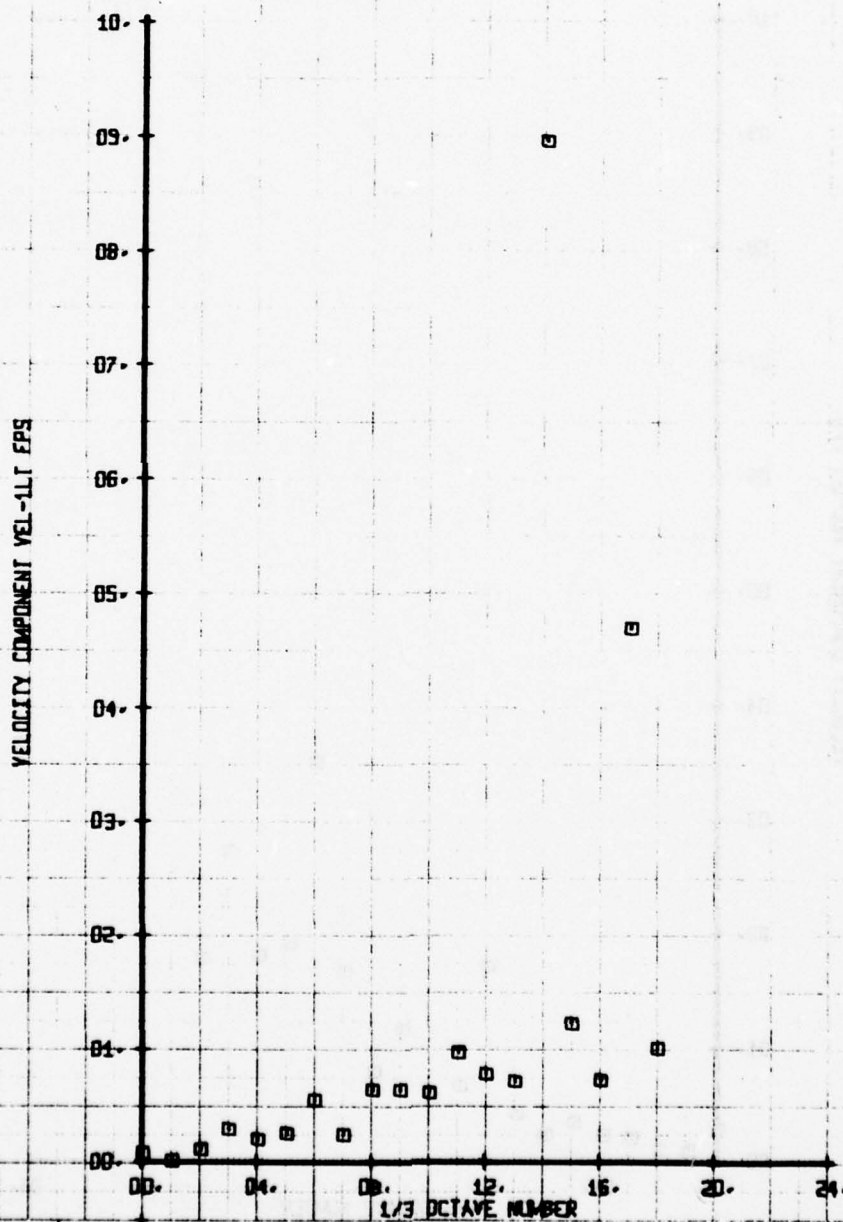


SET 2
 WT 169

SET 2
 BVWT 169

HOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C-L-
 RUN 112 TP 4

LEGEND
 SYM CH PARAMETER
 □ 73 VEL-1LT



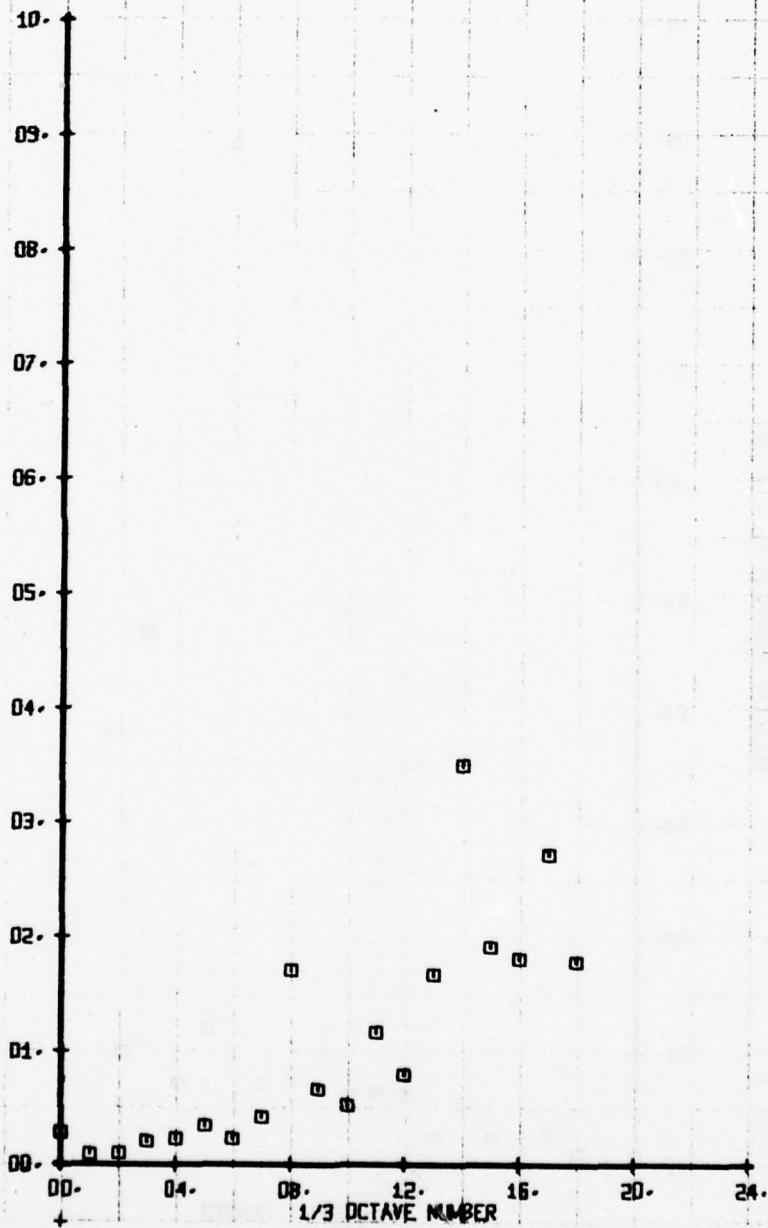
HOT FILM WAVE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE ABOVE T/R C-L.
RUN 112 TP 6

SYM
□

CH
73

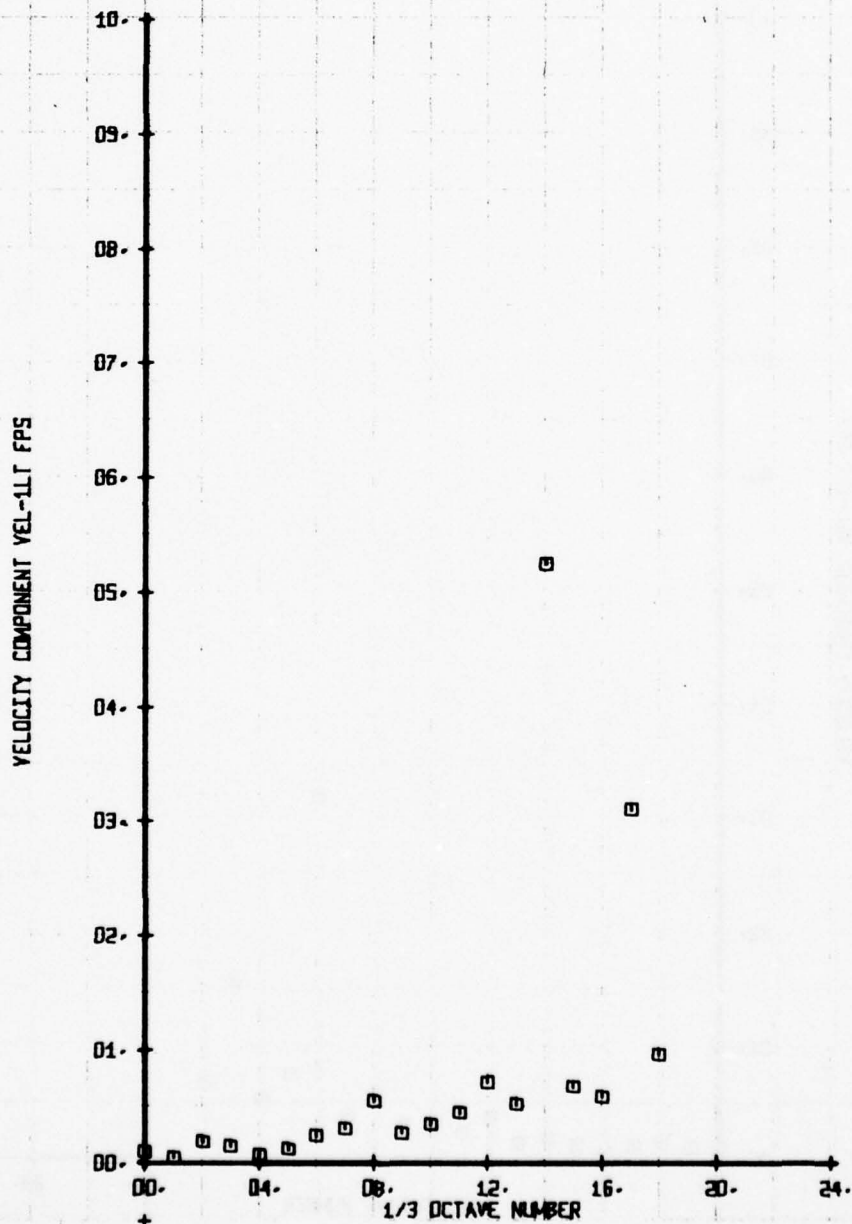
LEGEND
PARAMETER
VEL-1LT

VELOCITY COMPONENT VEL-1LT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C.L.
 RUN 112 TP B

LEGEND
 SYM CH PARAMETER
 □ 73 VEL-1LT

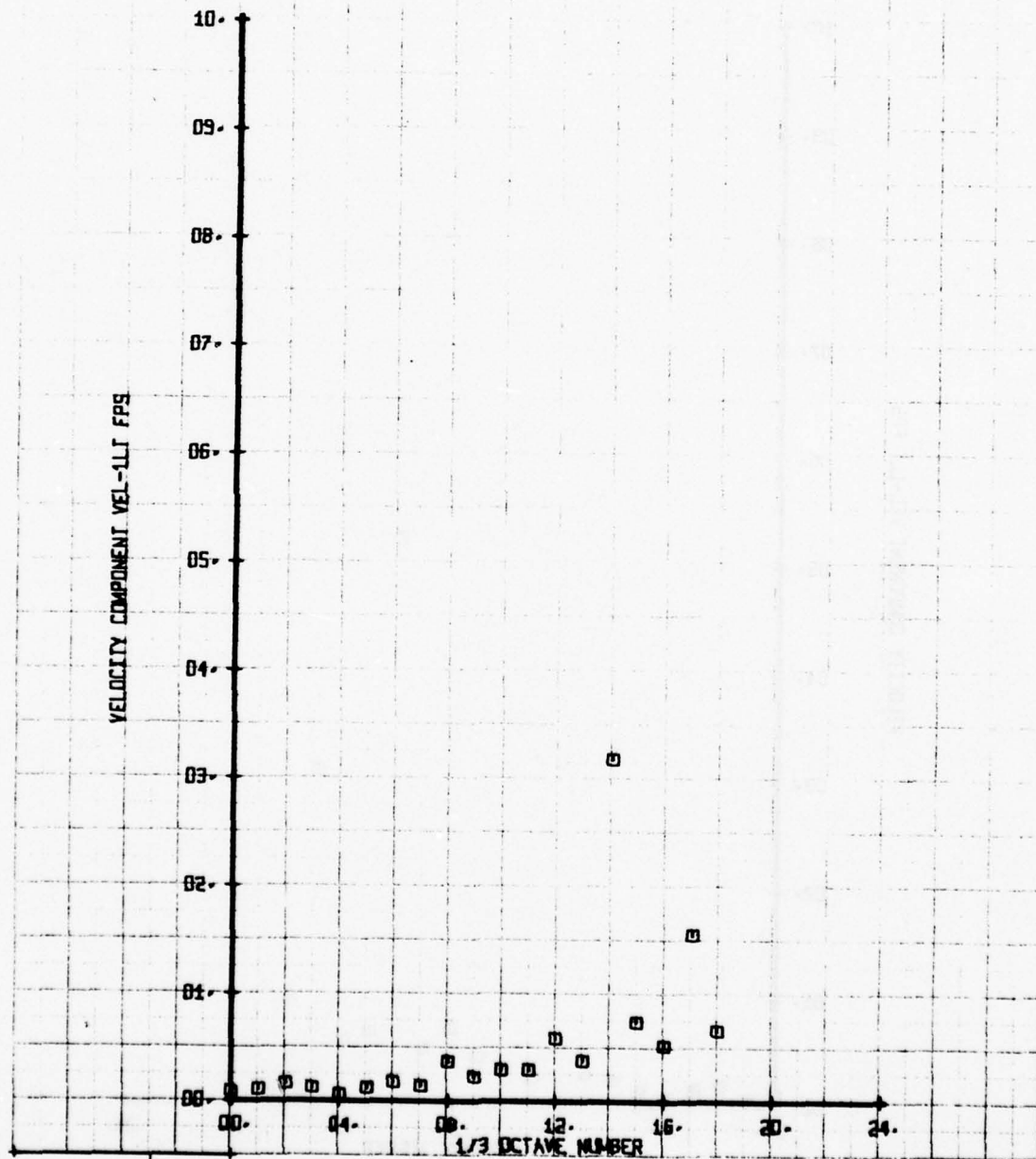


HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C.L.
 RUN 112 TP 10

SYM
 □

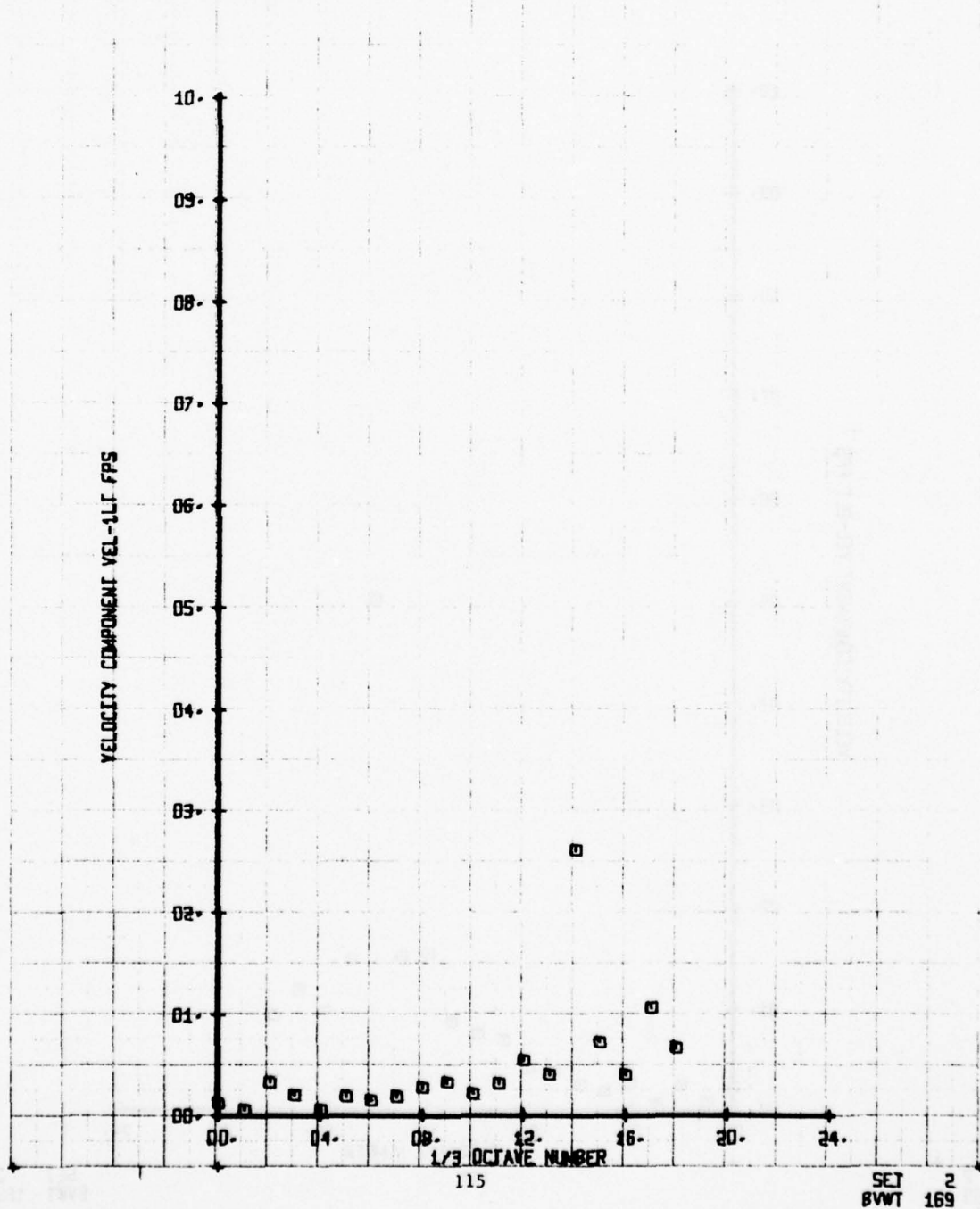
CH
 73

LEGEND
 PARAMETER
 VEL-1LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C-L.
 RUN 112 TP 12

LEGEND
 CH PARAMETER
 73 VEL-1LT

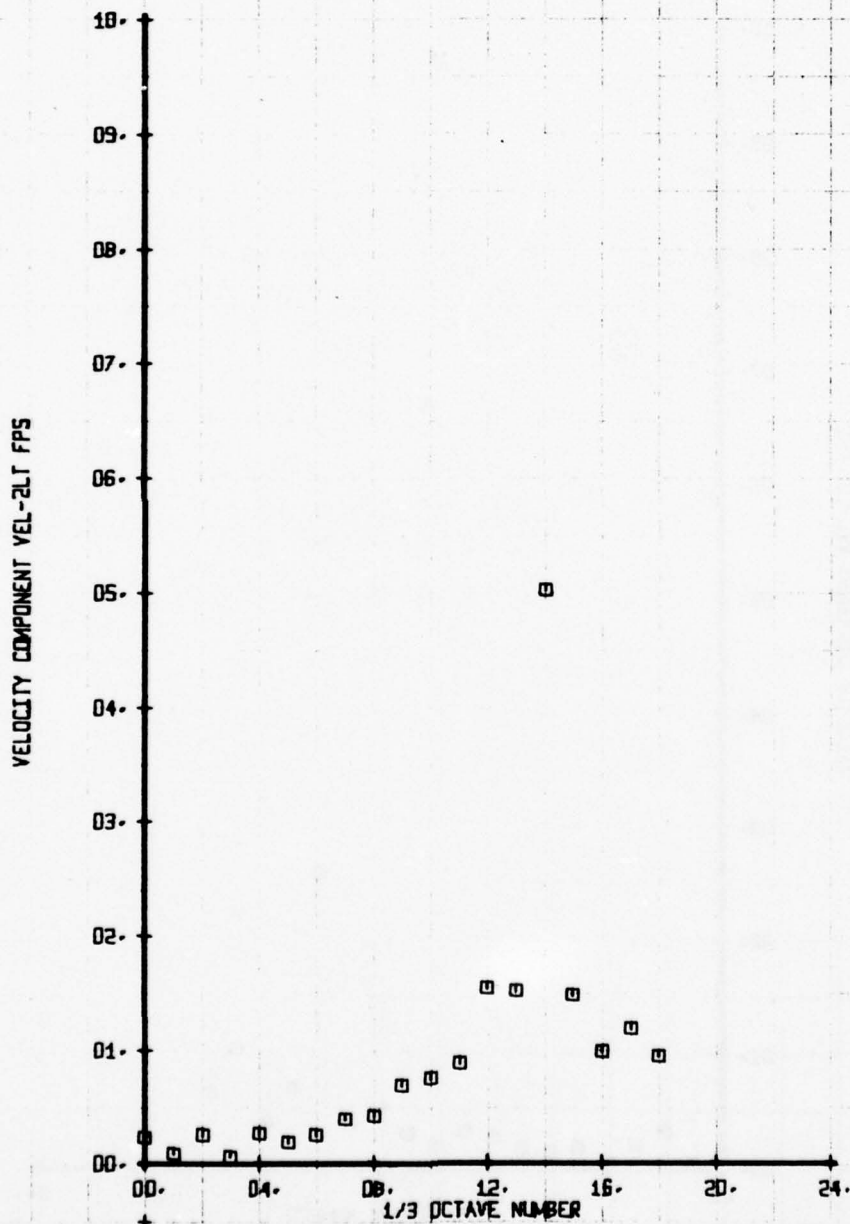


HOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C-L.
 RUN 112 TP 2

SYM
 □

CH
 72

LEGEND
 PARAMETER
 VEL-2LT



ET 2
 WT 169

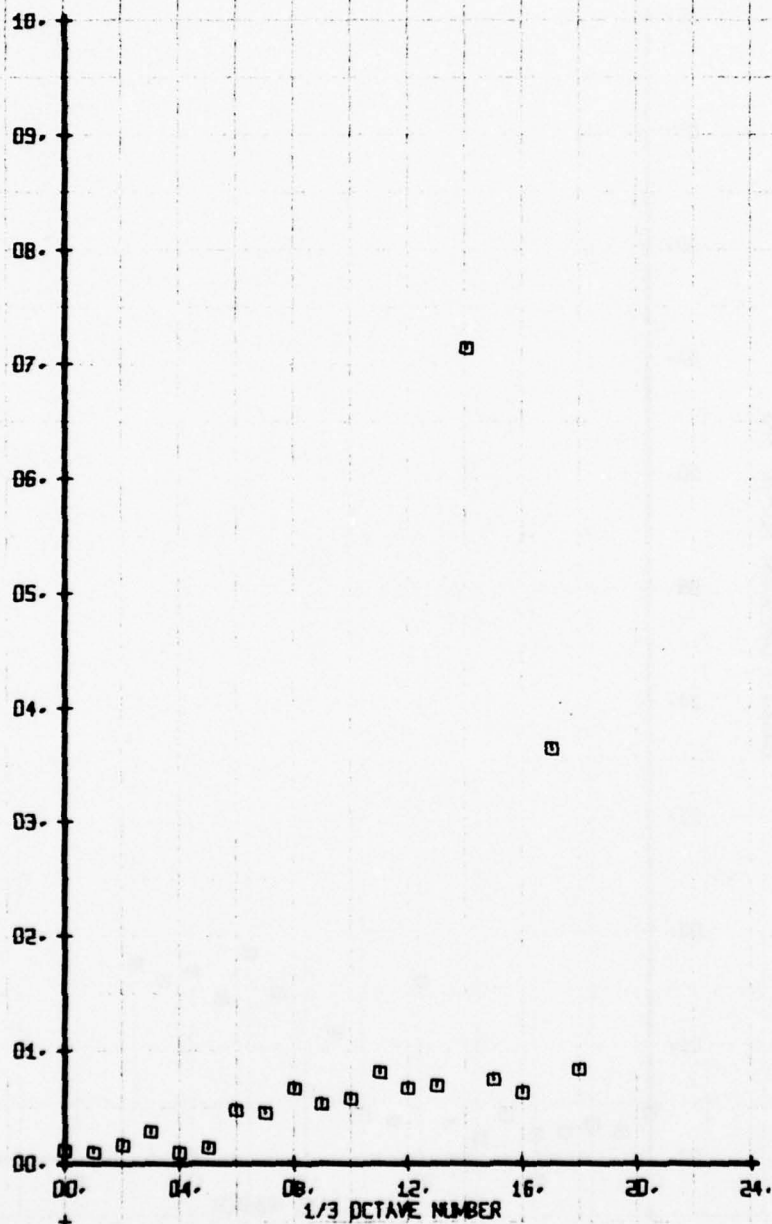
SET 2
 BWWT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C.L.
 RUN 112 TP 4

SYM
 □

LEGEND
 CH. 72
 PARAMETER
 VEL-ZLT

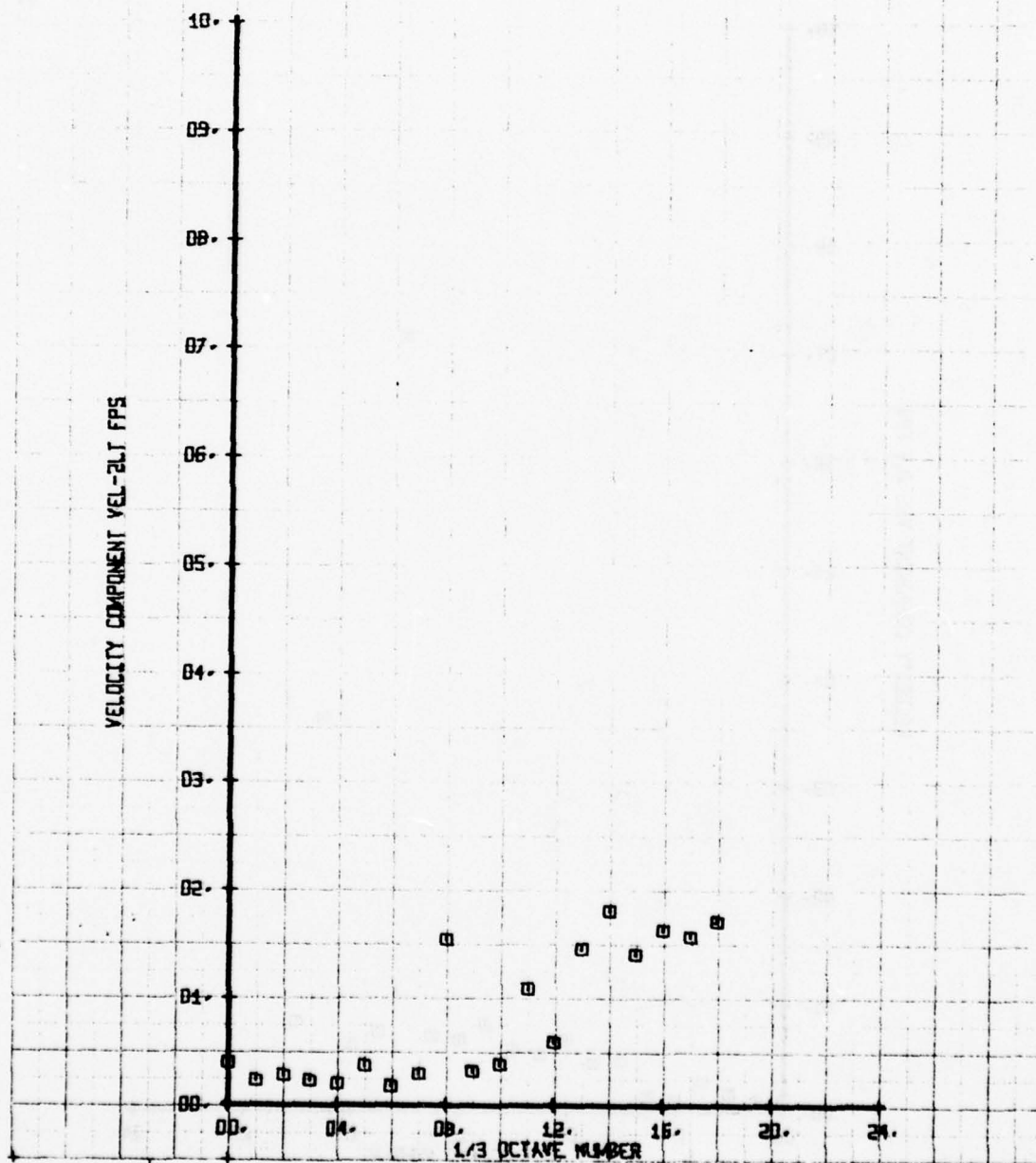
VELOCITY COMPONENT VEL-ZLT FPS



ET 2 +
 WT 169

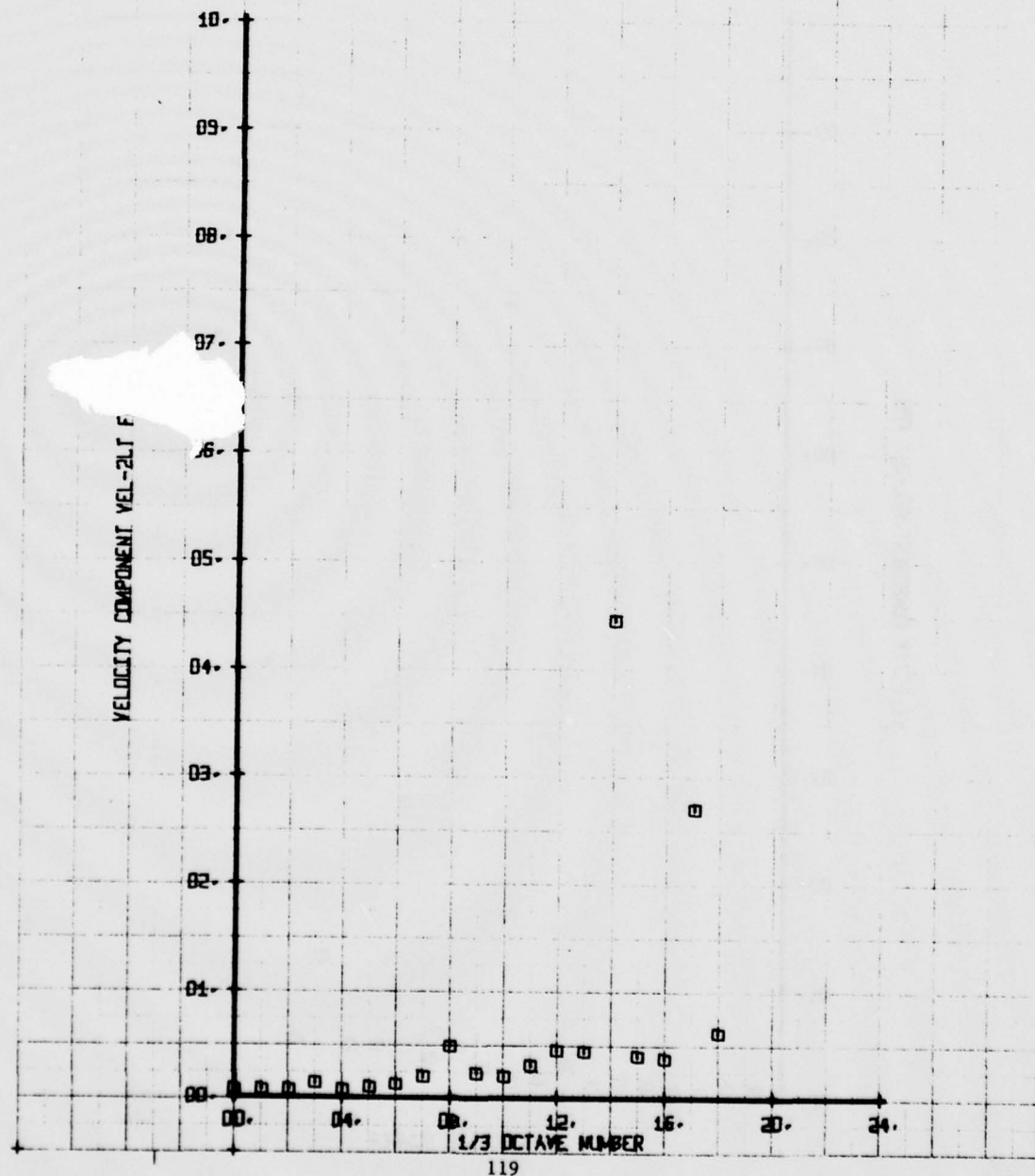
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE 1/R C-L-
 RUN 112 TP 6

SYM	CH	PARAMETER
□	72	VEL-2LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C-L-
 RUN 112 TP B

LEGEND
 SYM CH PARAMETER
 □ 72 VEL-2LT



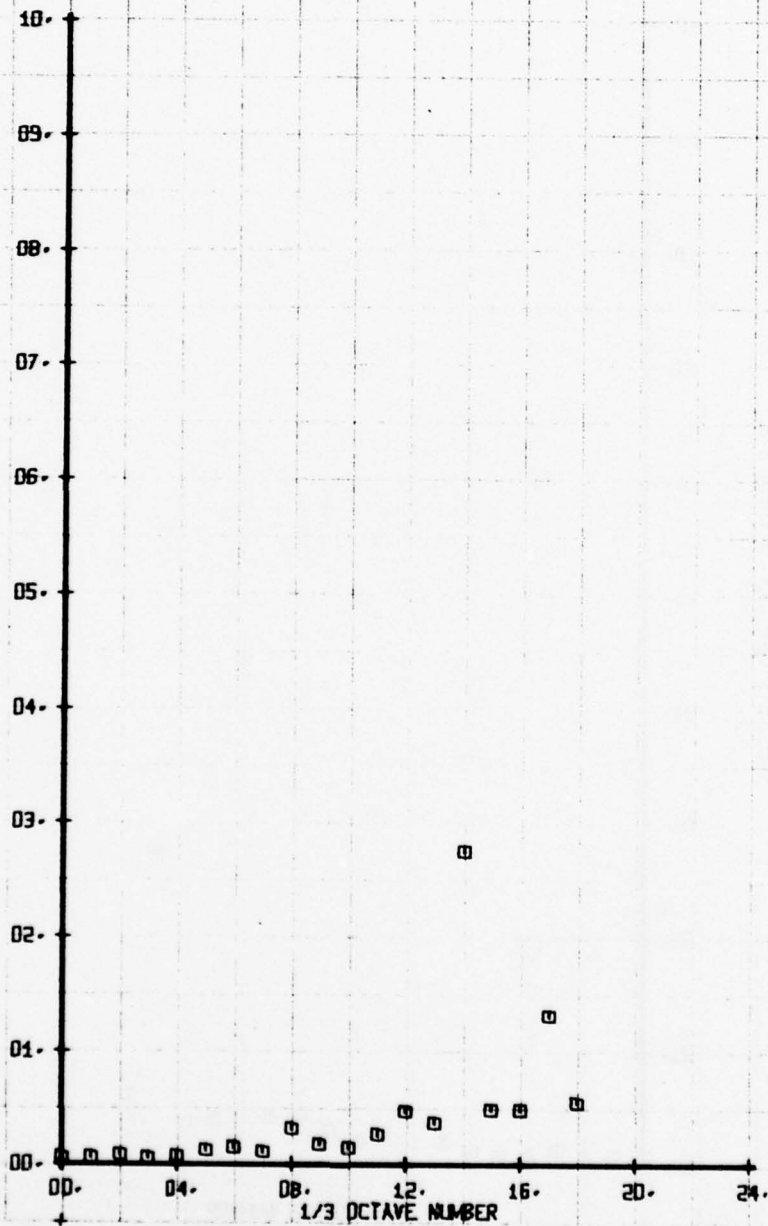
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE ABOVE T/R C.L.
RUN 112 TP 10

SYM
□

CH
72

LEGEND
PARAMETER
VEL-2LT

VELOCITY COMPONENT VEL-2LT FPS

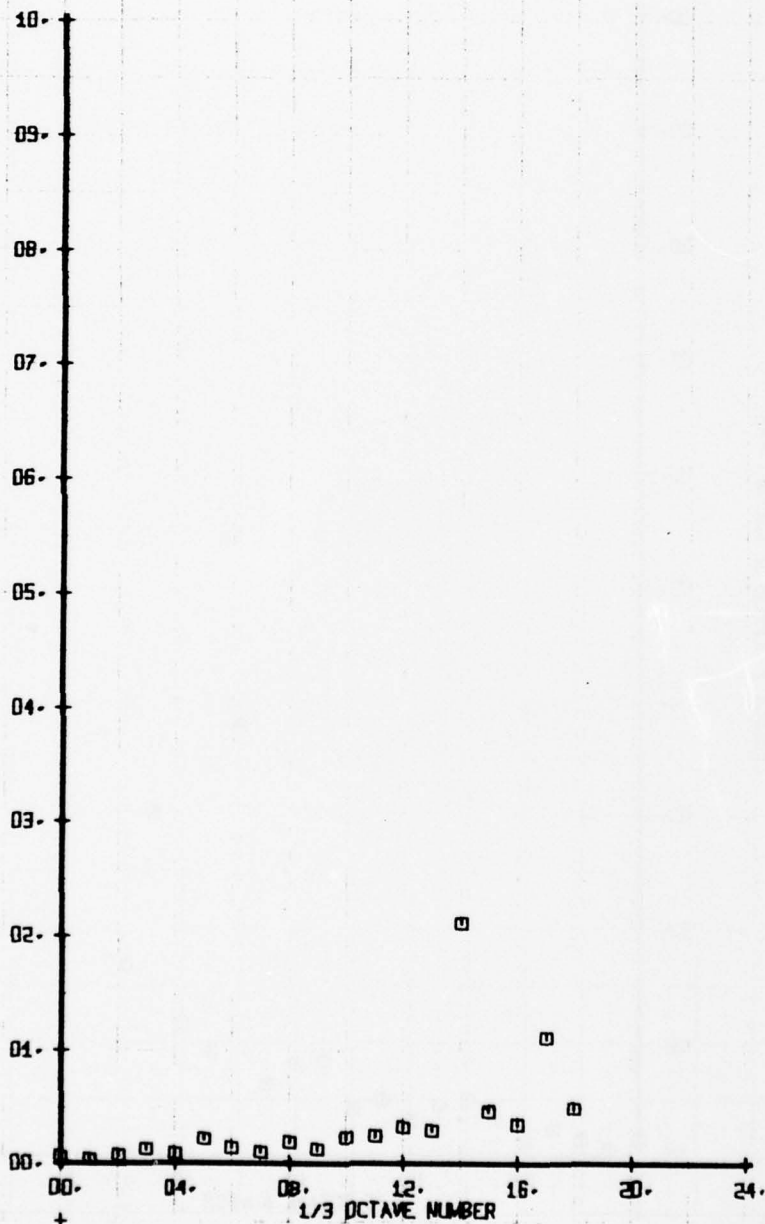


HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C-L.
 RUN 112 TP 12

SYM
 □

LEGEND
 CH 72
 PARAMETER
 VEL-2LT

VELOCITY COMPONENT VEL-2LT FPS



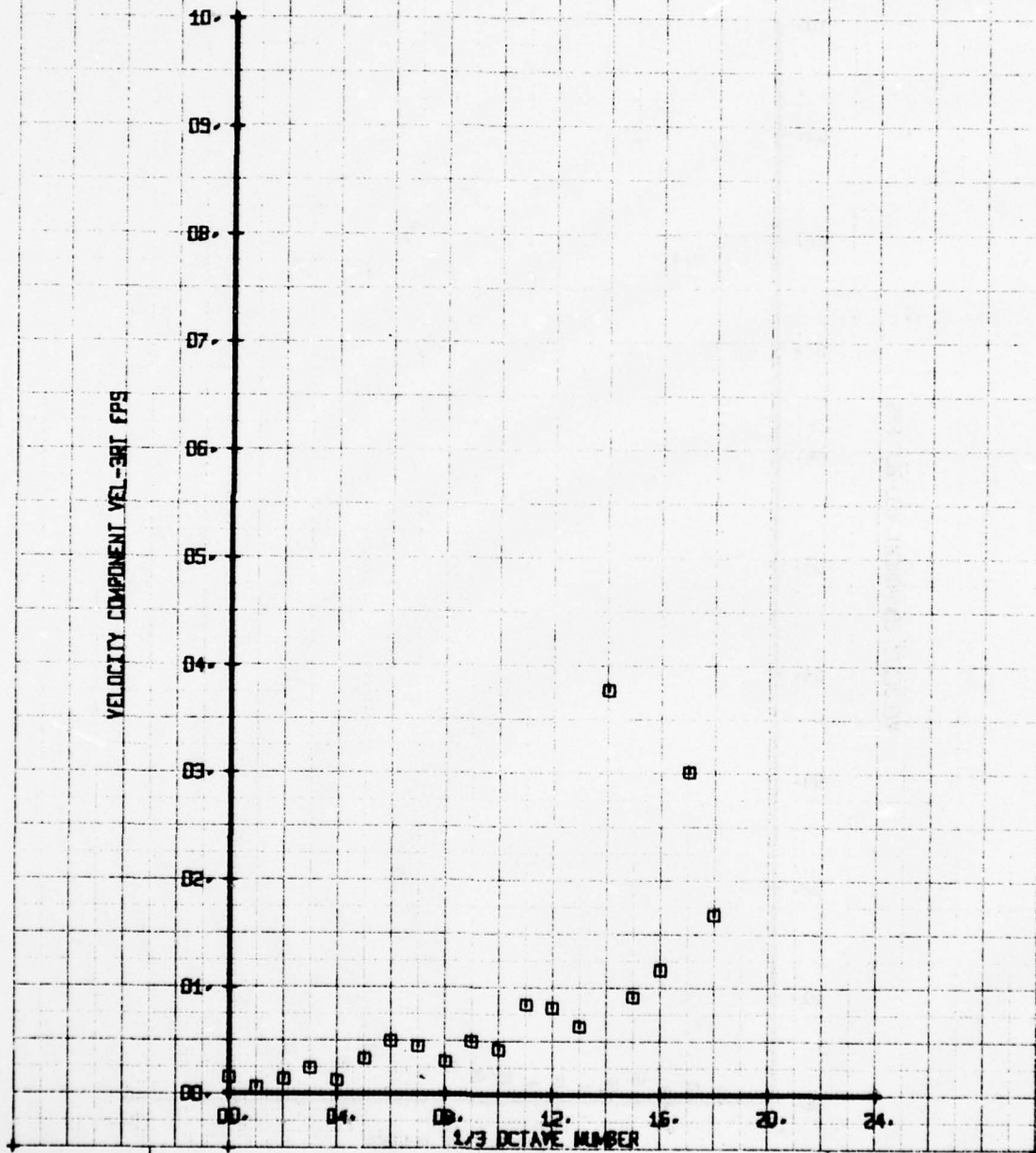
121

SET 2
 BWVT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE THROUGH VORTEX
 RUN 113 TP 2

SYN CH PARAMETER
 0 71 VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS

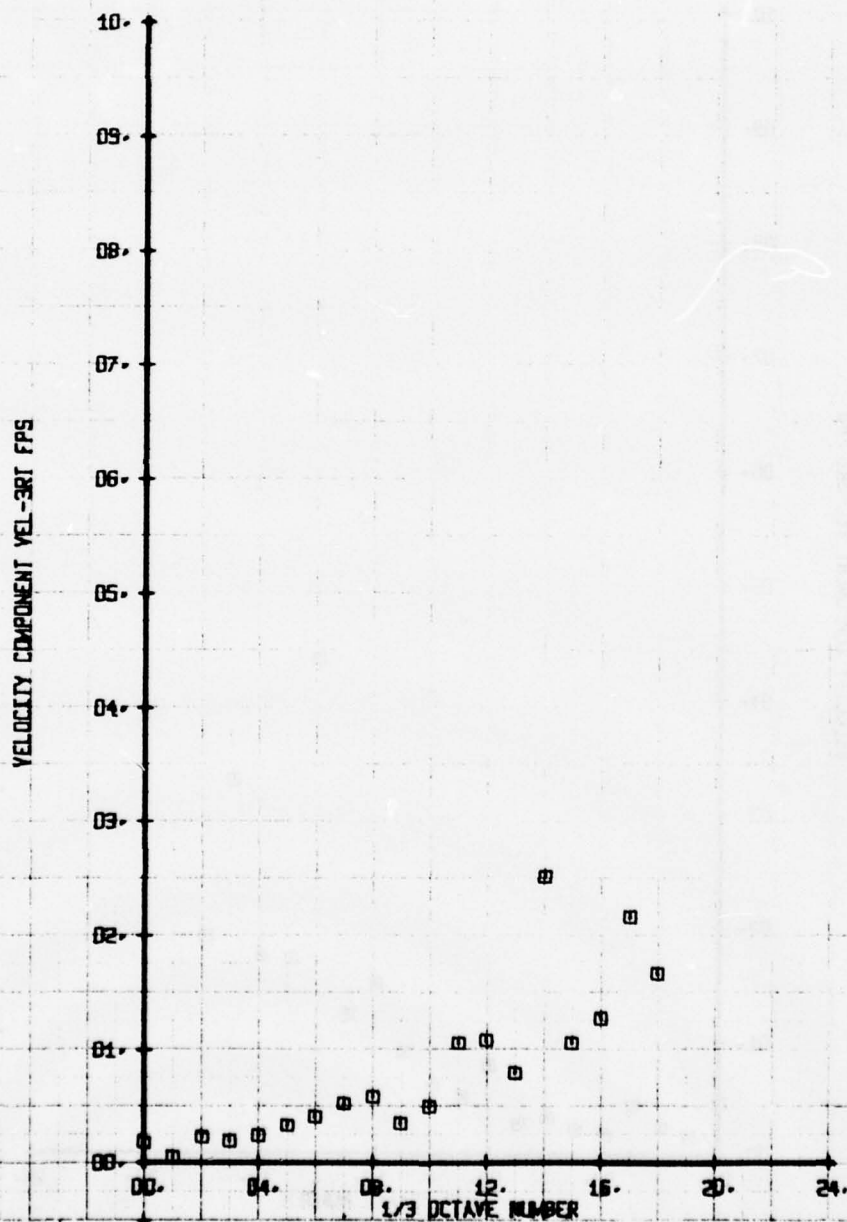


ET 3
 WT 169

SET 3
 BWWT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE THROUGH VORTEX
 RUN 113 TP 4

LEGEND
 SWM CH PARAMETER
 71 VEL-3RT



ET 3
 WT 169

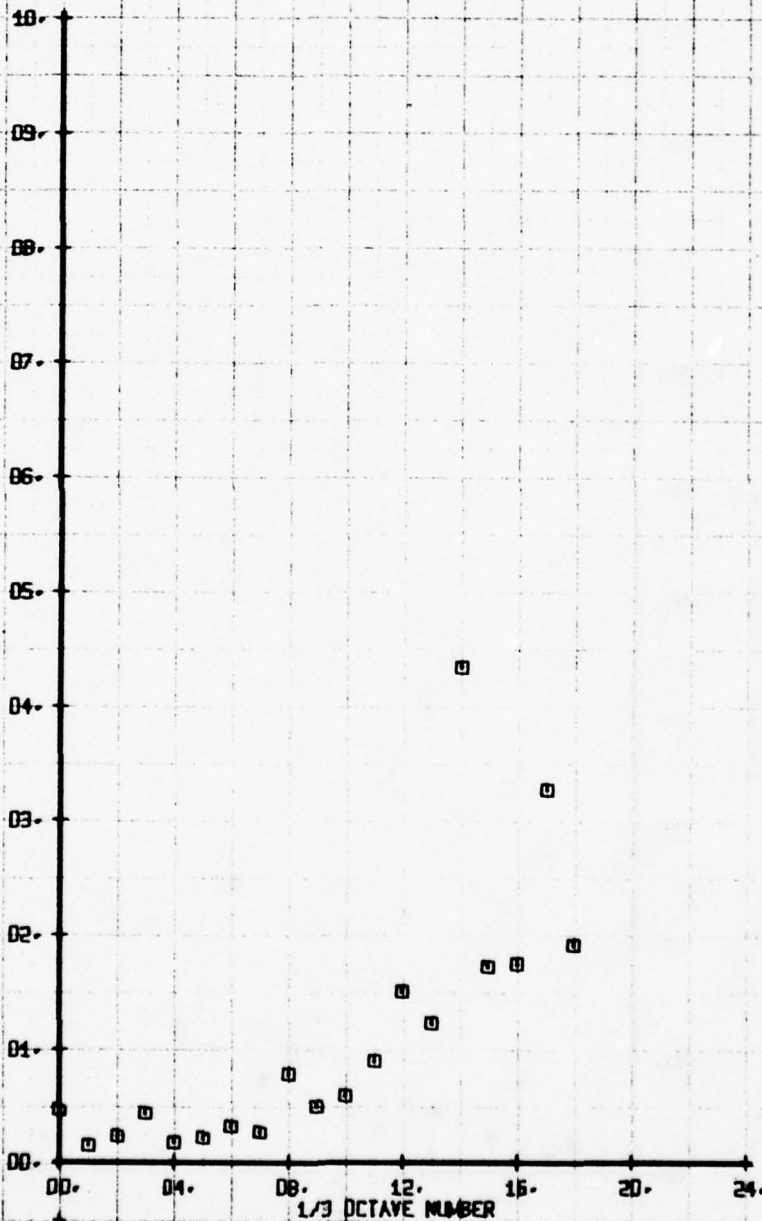
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE THROUGH VORTEX
 RUN 113 TP 6

SYM
 □

CH
 71

LEGEND
 PARAMETER
 VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS



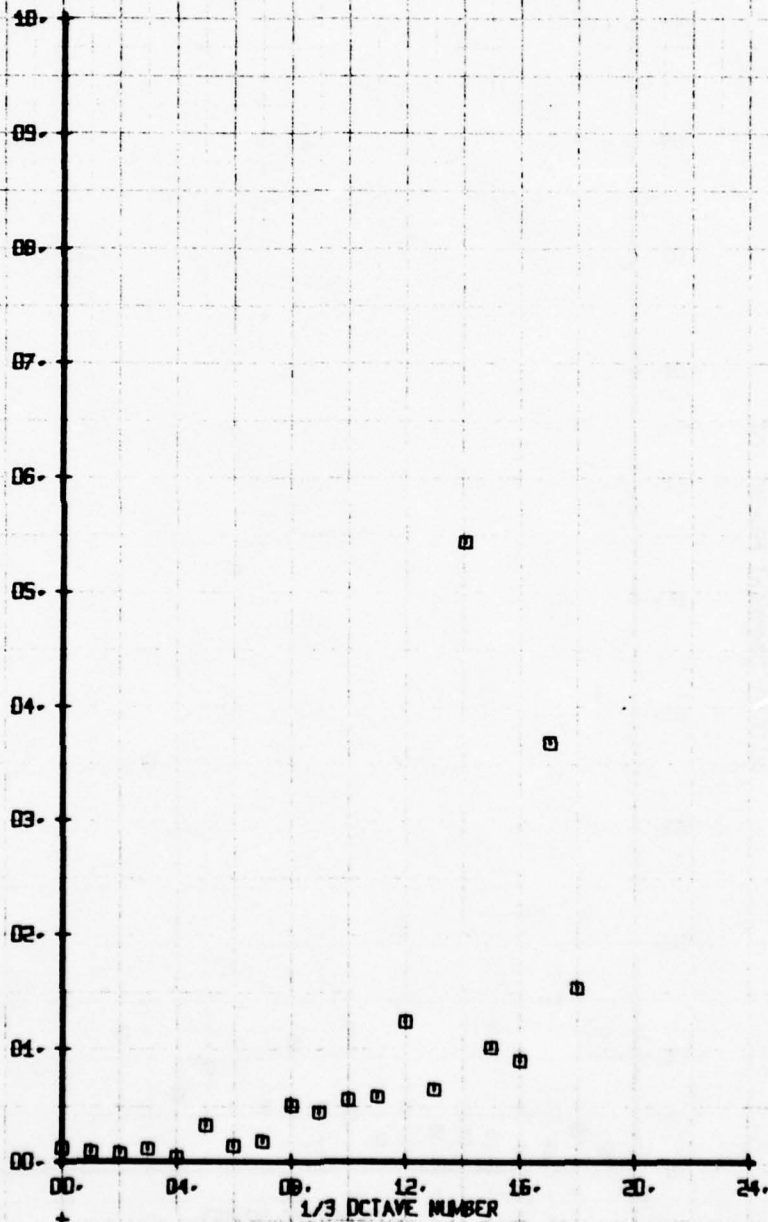
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE COMET6, TRAVERSE THROUGH VORTEX
 RUN 113 TP B

SWM
 0

CH
 71

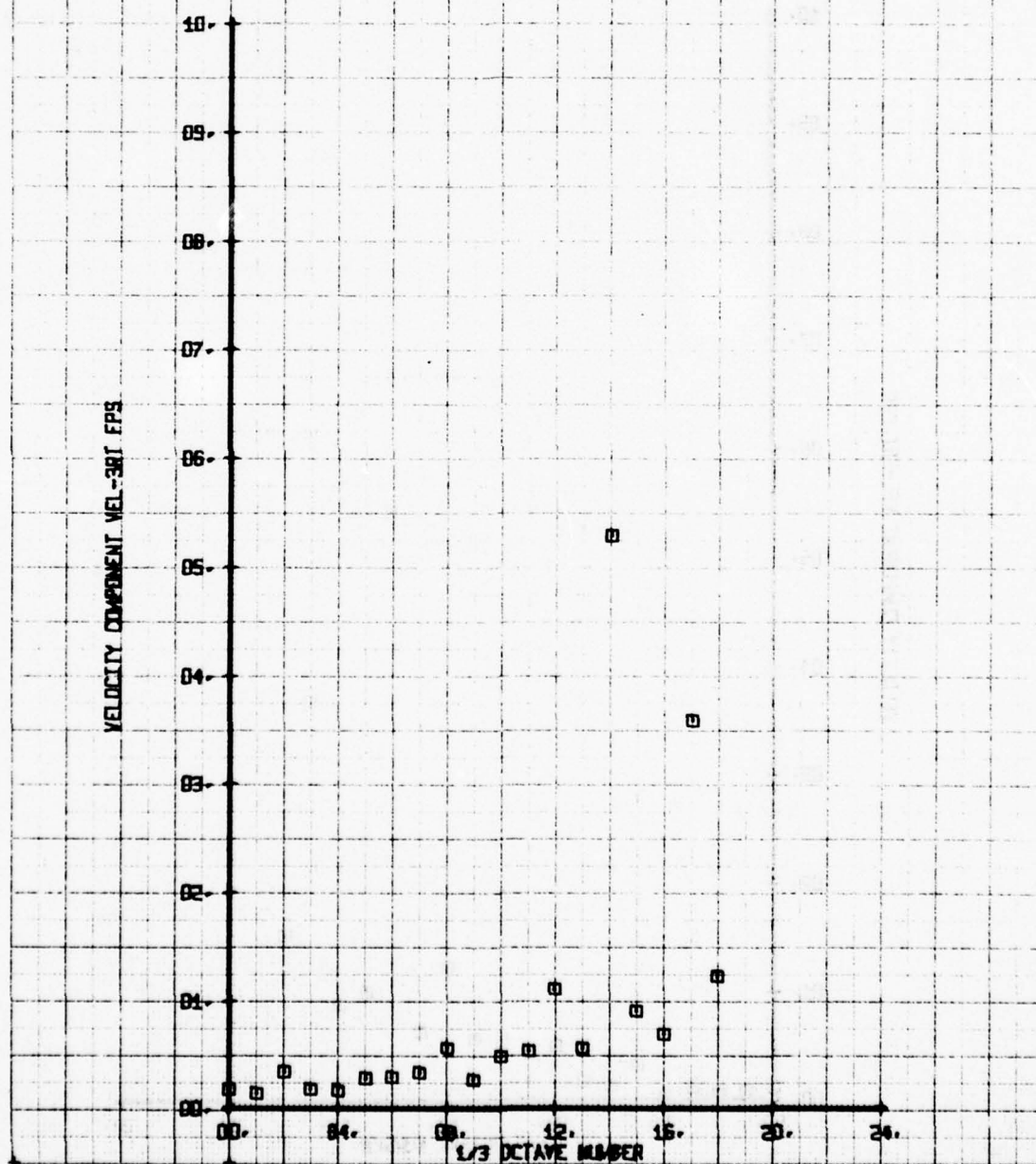
LEGEND
 PARAMETER
 VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE THROUGH VORTEX
RUN 113 TP 10

LEGEND
SYM CH PARAMETER
□ 71 VEL-3RT

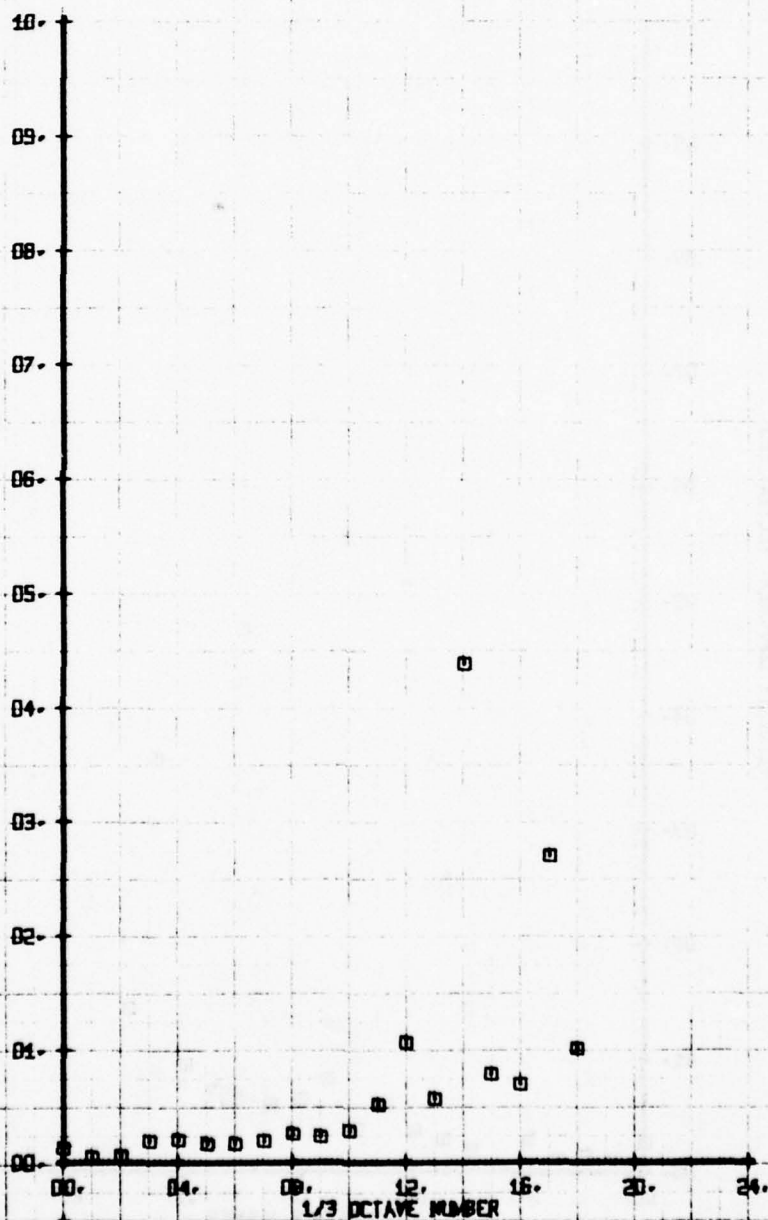


HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE THROUGH VORTEX
RUN 113 TP 11

SYM
□

LEGEND
CH 71
PARAMETER
VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS



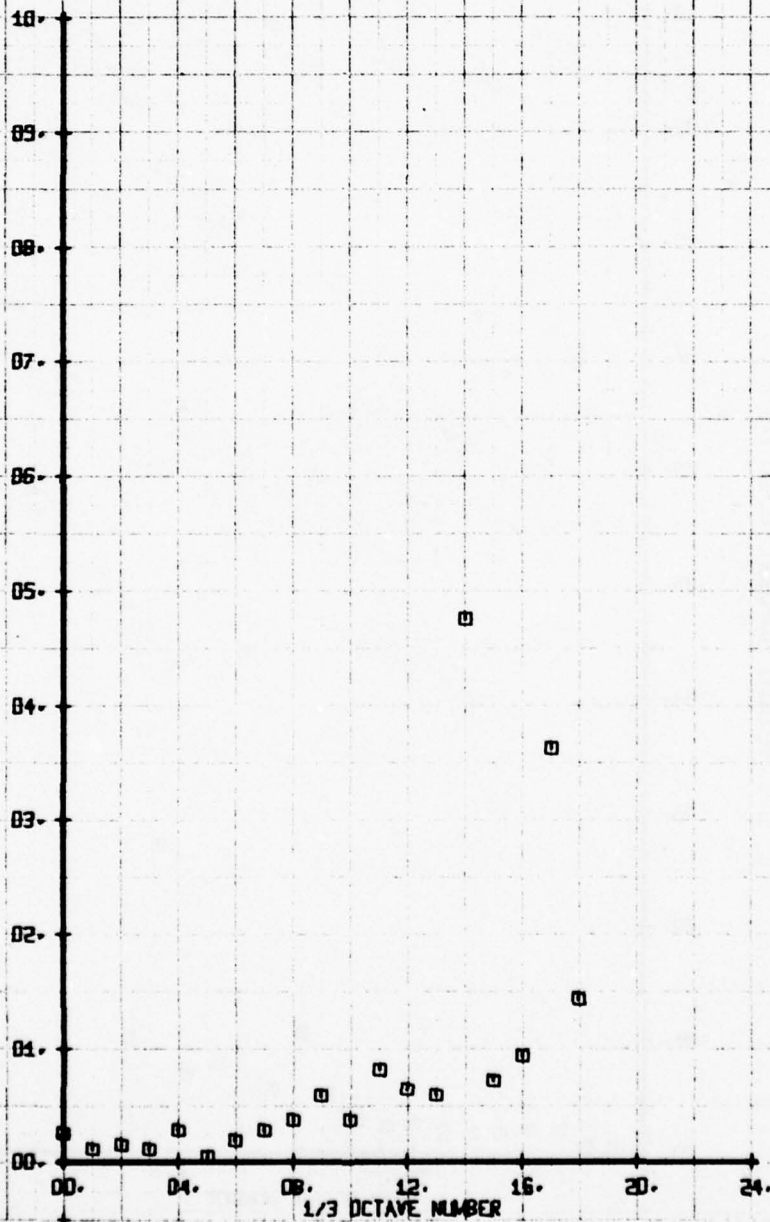
127

SET 3
BWWT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE THROUGH VORTEX
 RUN 113 TP 2

SYM	CH	PARAMETER
□	75	VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS



ET 3
WT 169

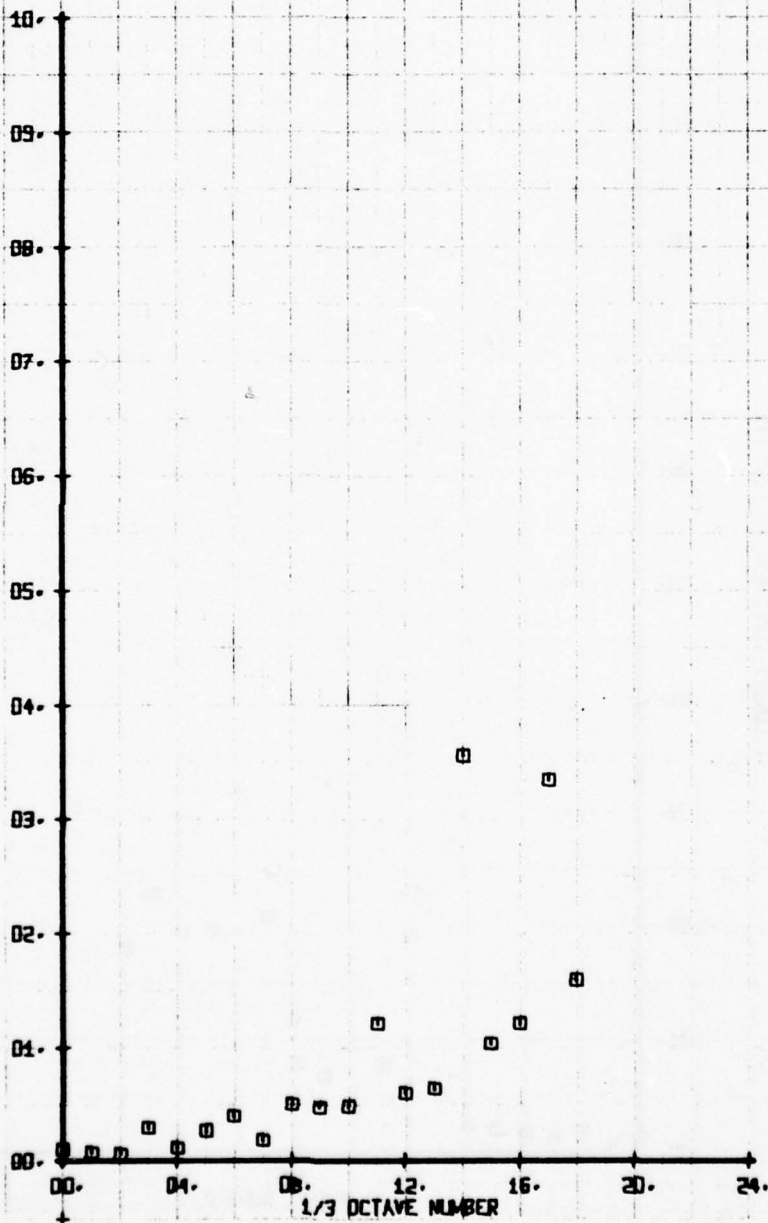
128

SET 3
BWV 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE THROUGH VORTEX
 RUN 113 TP 4

SYN CH LEGEND
 0 75 PARAMETER
 VEL-2RT

VELOCITY COMPONENT VEL-2RT FPS



ET 3
 WT 169

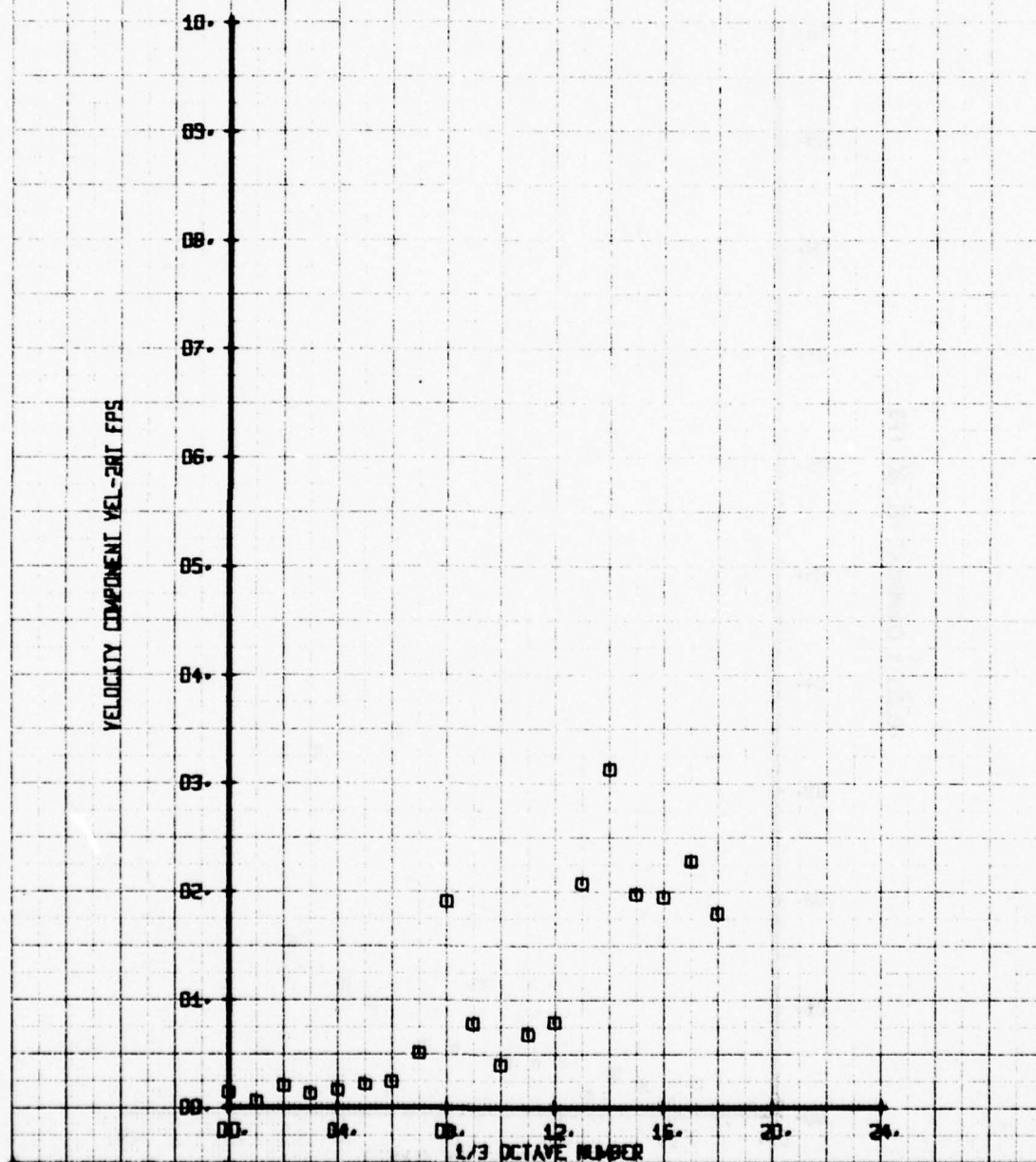
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE THROUGH VORTEX
RUN 113 TP 6

SYM
□

CH
75

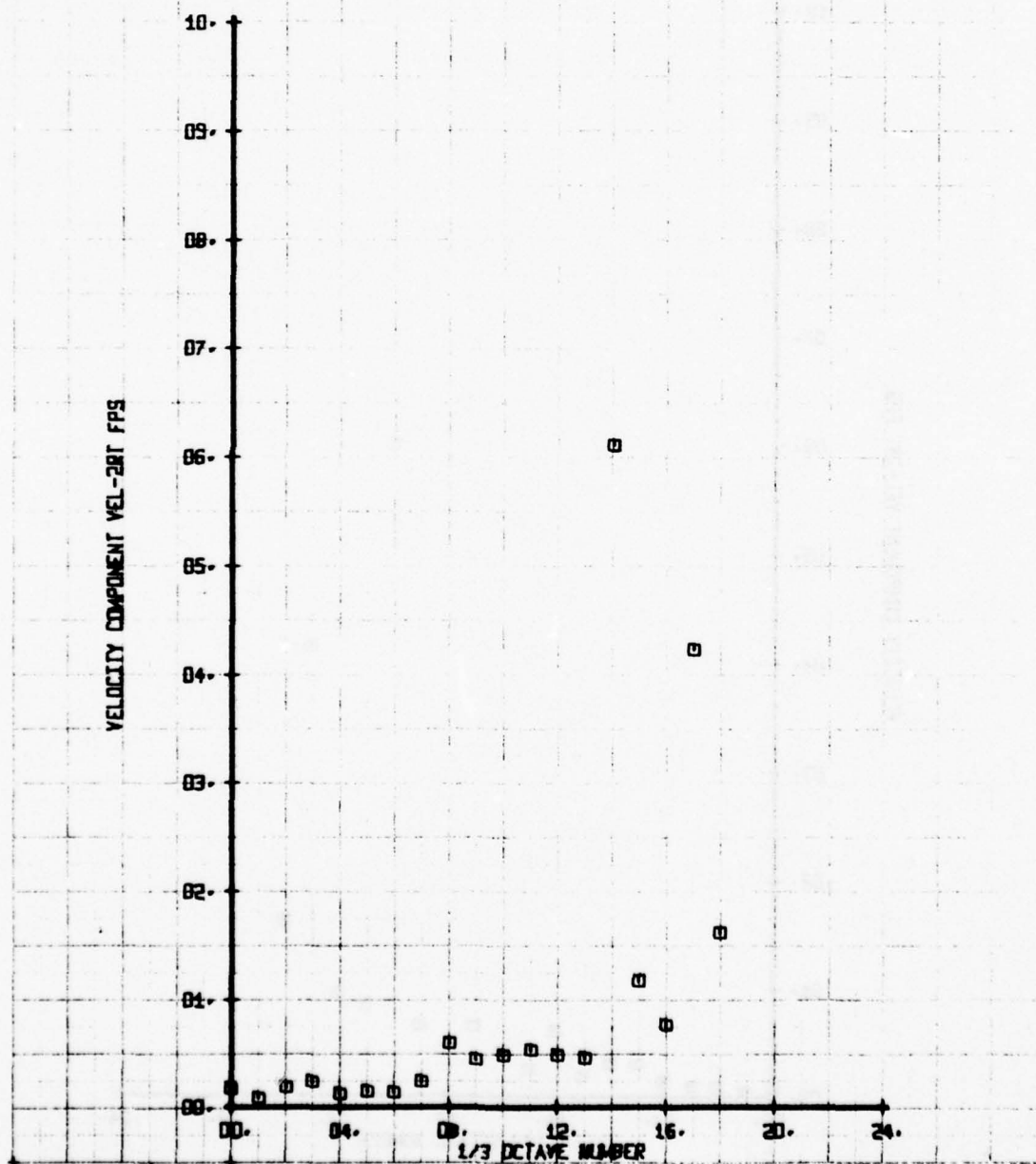
LEGEND
PARAMETER
VEL-2RT

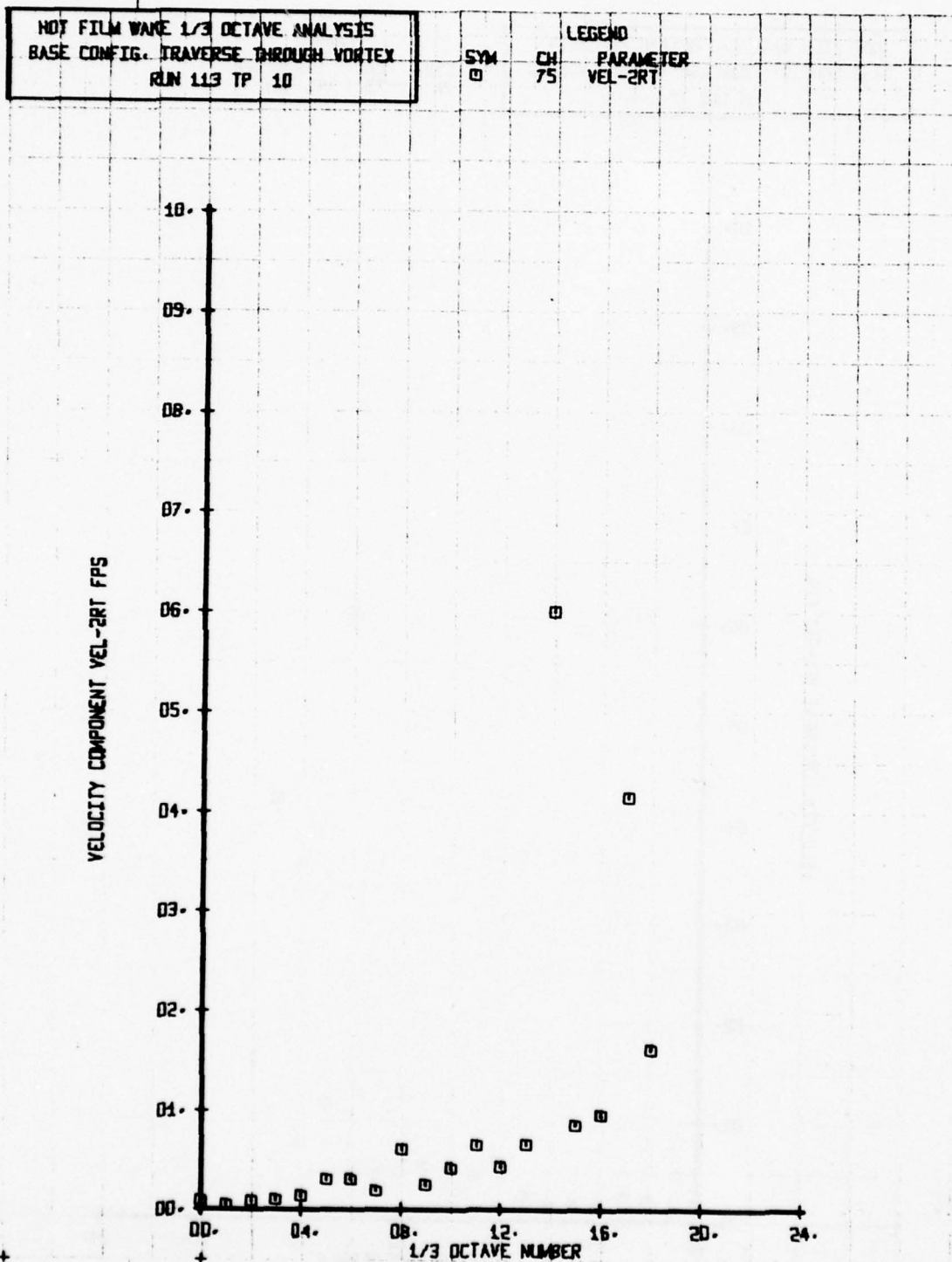
VELOCITY COMPONENT VEL-2RT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE THROUGH VORTEX
RUN 113 TP B

LEGEND		
SYM	CH	PARAMETER
□	75	VEL-2RT

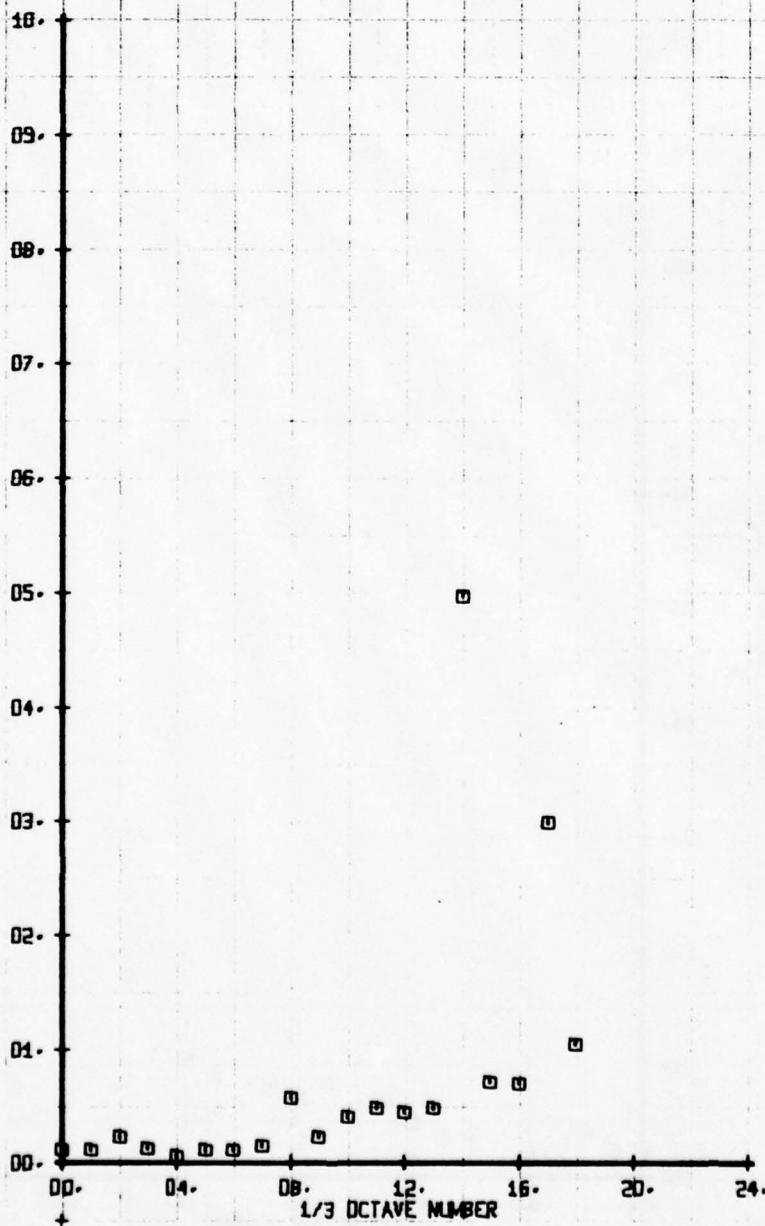




HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE THROUGH VORTEX
 RUN 113 TP 11

SYM CH PARAMETER
 □ 75 VEL-2RT

VELOCITY COMPONENT VEL-2RT FPS

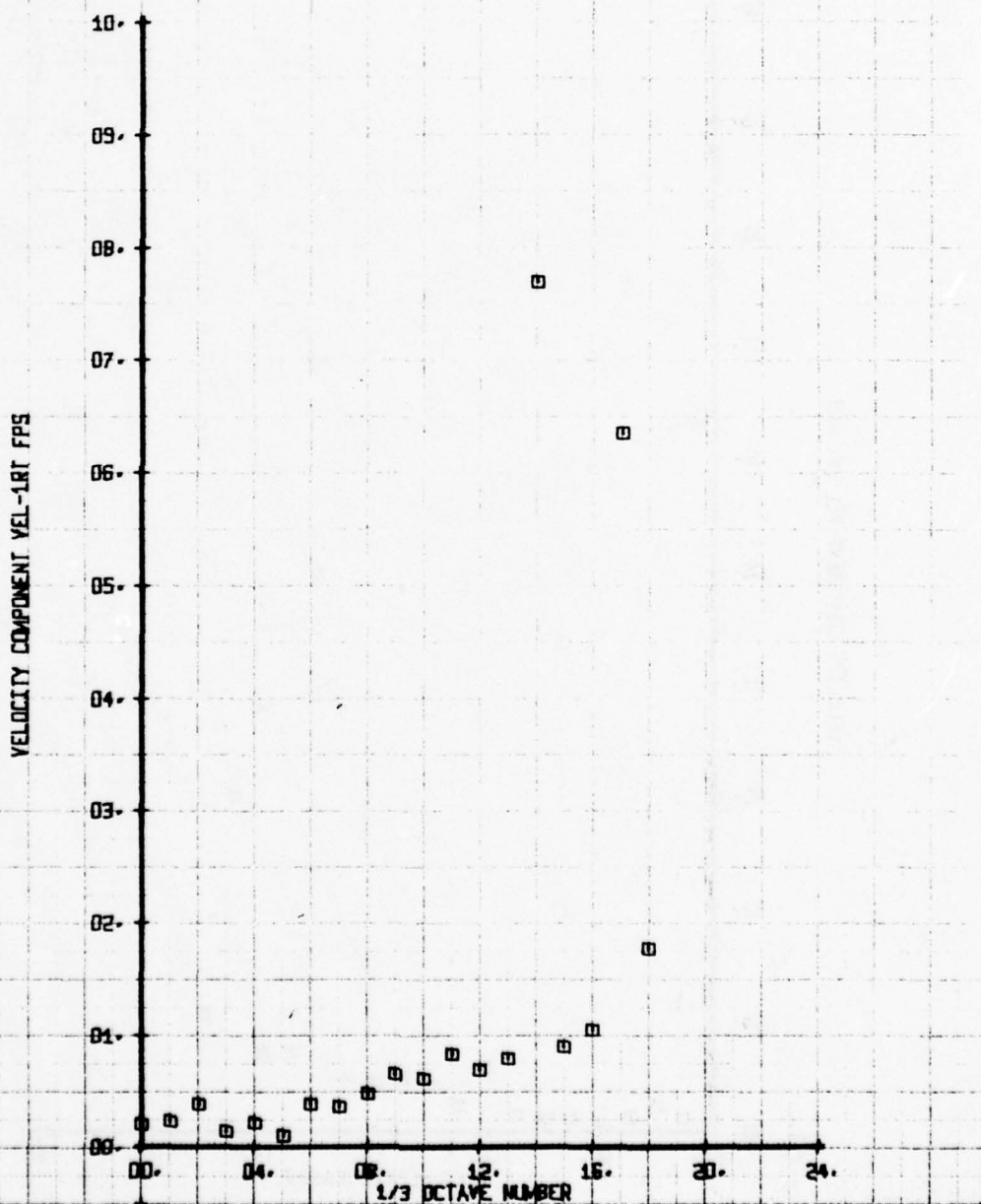


133

SET 3
 BVWT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE THROUGH VORTEX
 RUN 113 TP 2

SYN
 CH 74
 PARAMETER
 VEL-1RT



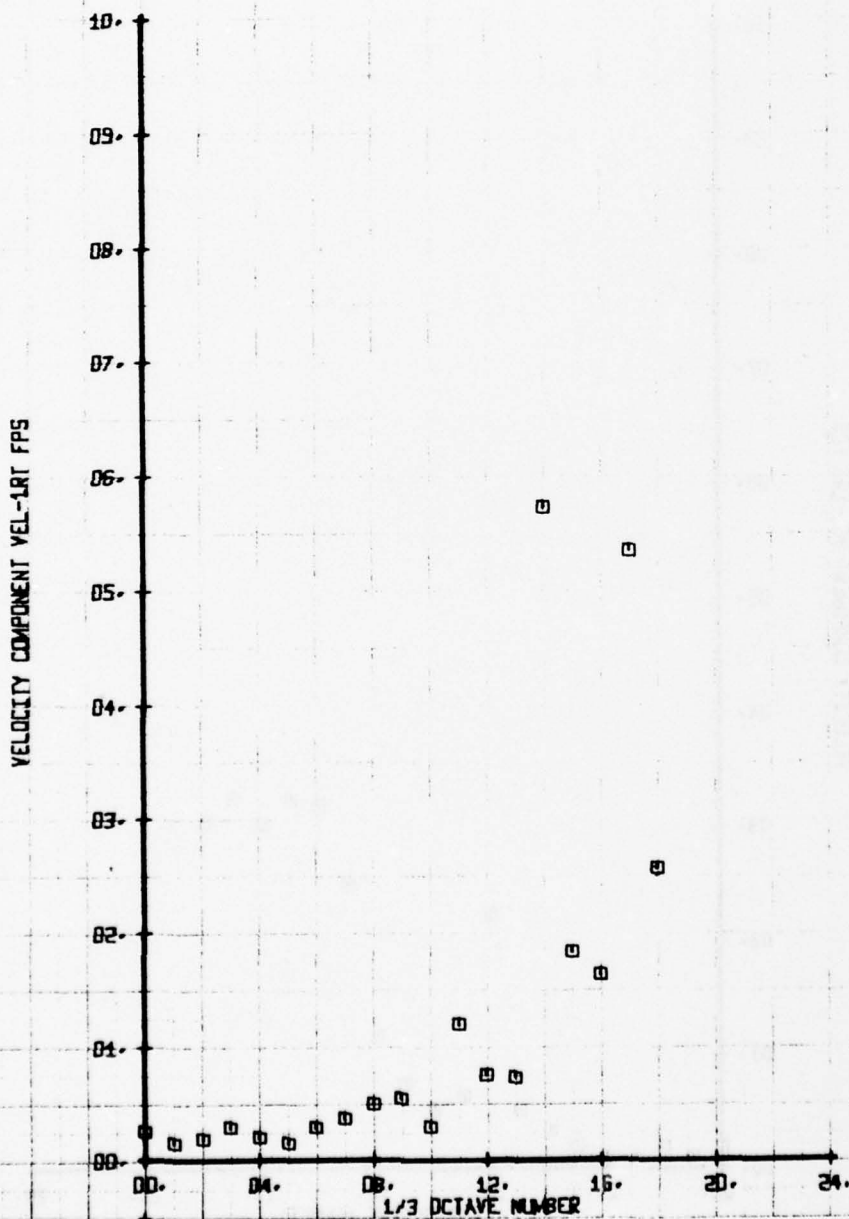
ET 3
 WT 169

134

SET 3
 BWWT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE THROUGH VORTEX
 RUN 113 TP 4

LEGEND
 SYM CH PARAMETER
 □ 74 VEL-1RT



ET 3
 WT 169

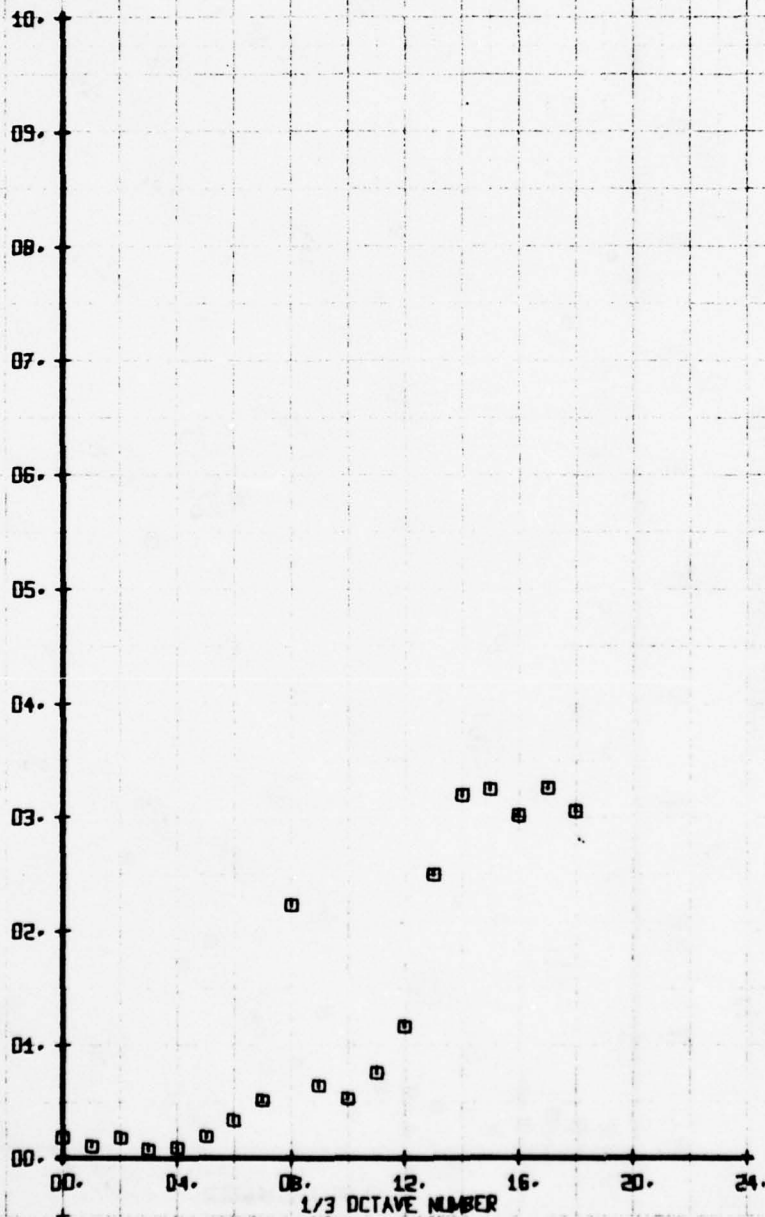
HOT FILM WARE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE THROUGH VORTEX
RUN 113 TP 6

SYM
0

CH
74

LEGEND
PARAMETER
VEL-1RT

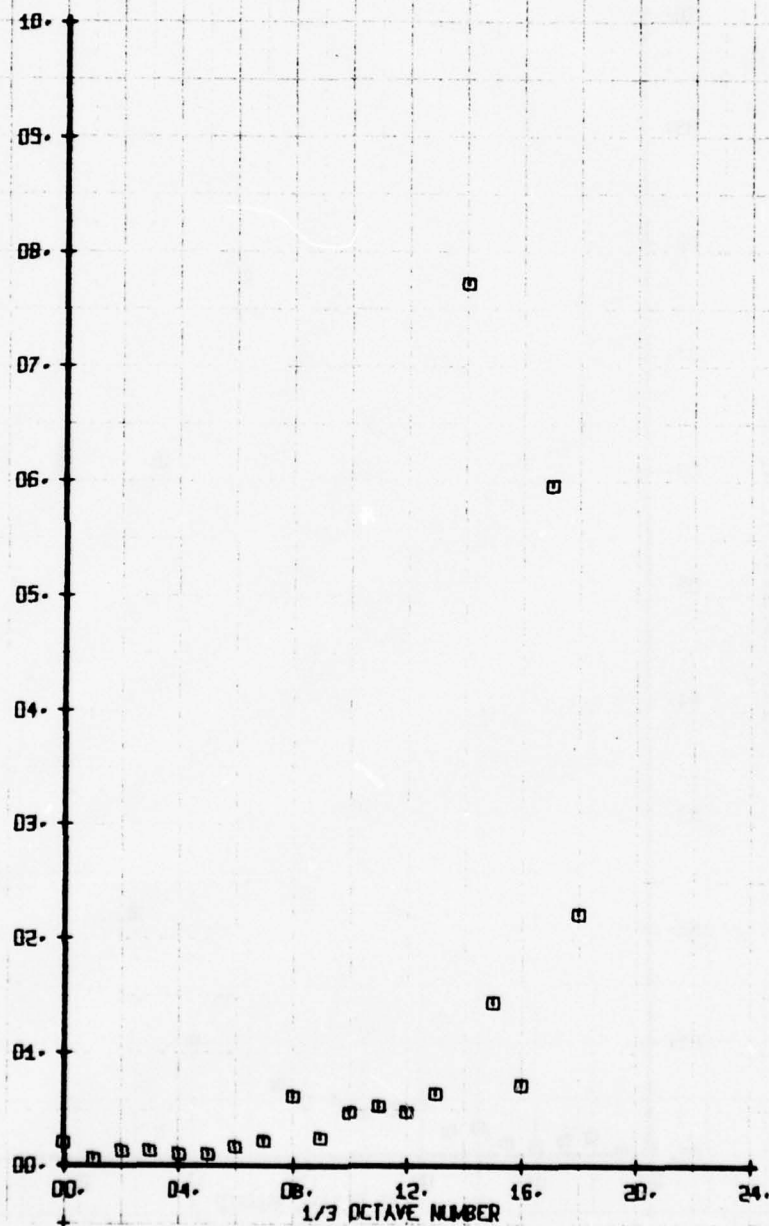
VELOCITY COMPONENT VEL-1RT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE THROUGH VORTEX
 RUN 113 TP B

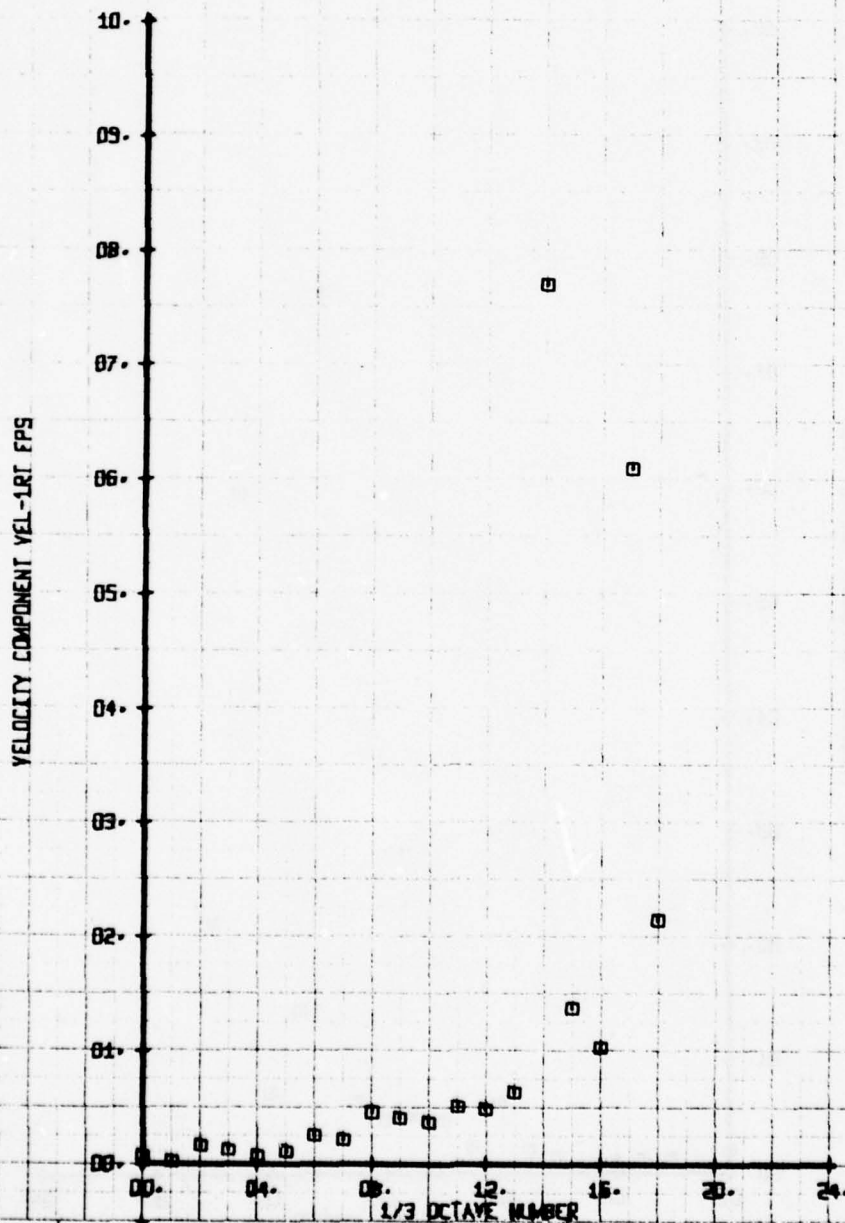
SYM CH LEGEND
 □ 74 PARAMETER
 VEL-1RT

VELOCITY COMPONENT VEL-1RT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE THROUGH VORTEX
 RUN 113 TP 10

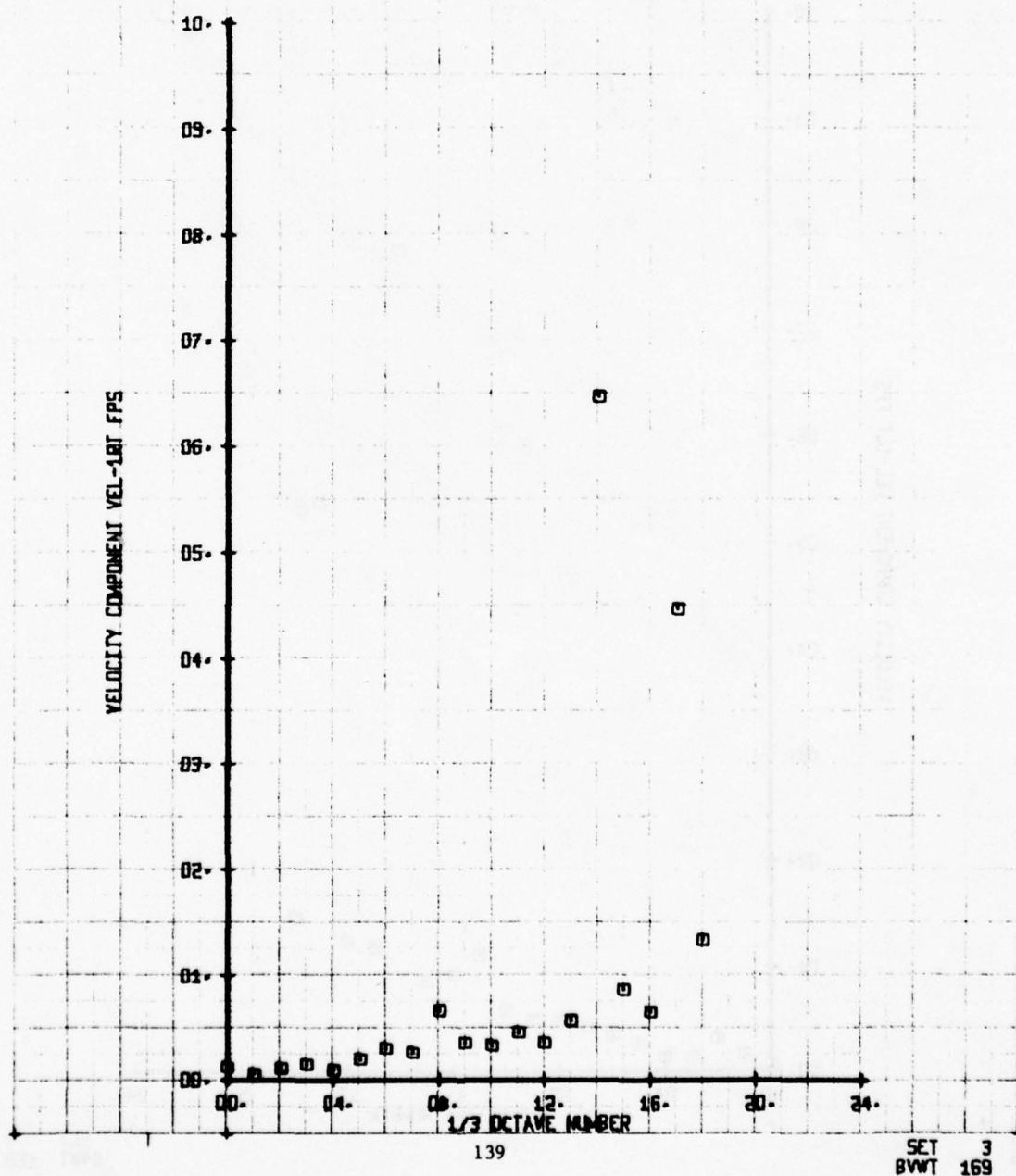
SYN CH PARAMETER
 0 74 VEL-1RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE THROUGH VORTEX
RUN 113 TP 11

SYM
□

LEGEND
CH 74
PARAMETER
VEL-1RT



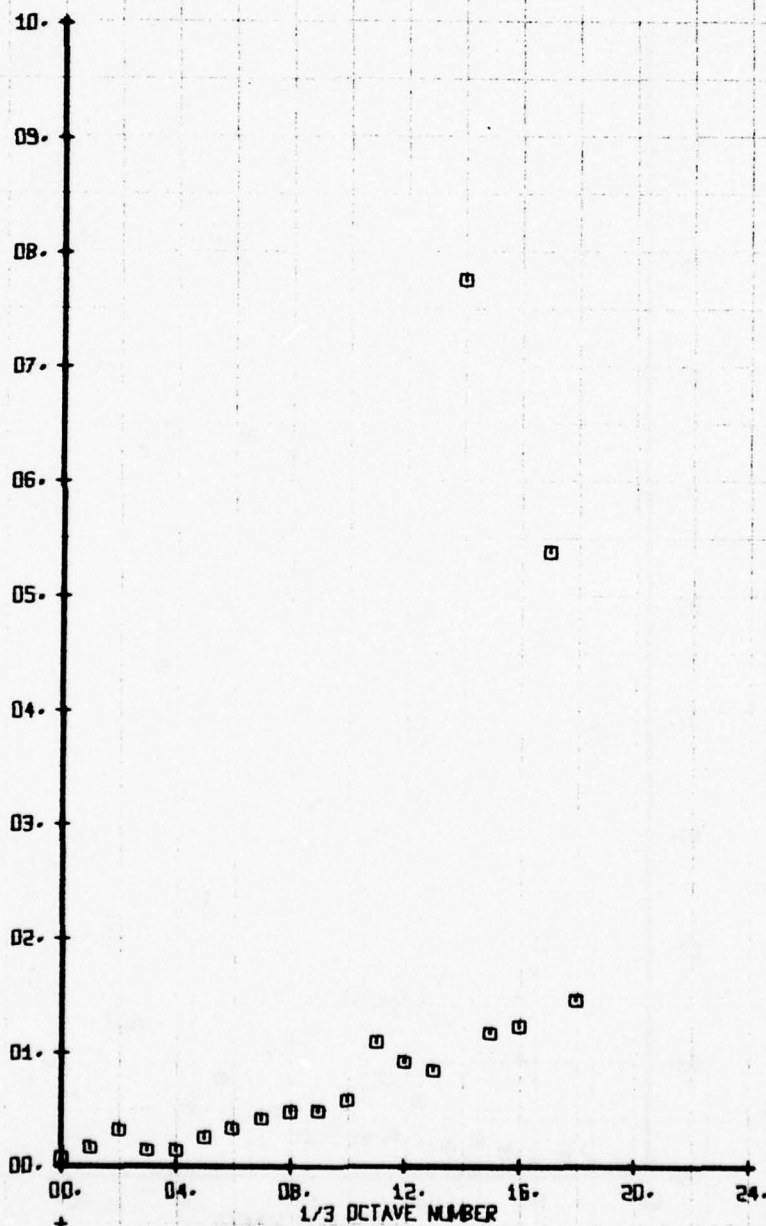
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE THROUGH VORTEX
 RUN 113 TP 2

SYM
 □

CH
 73

LEGEND
 PARAMETER
 VEL-1LT

VELOCITY COMPONENT VEL-1LT FPS



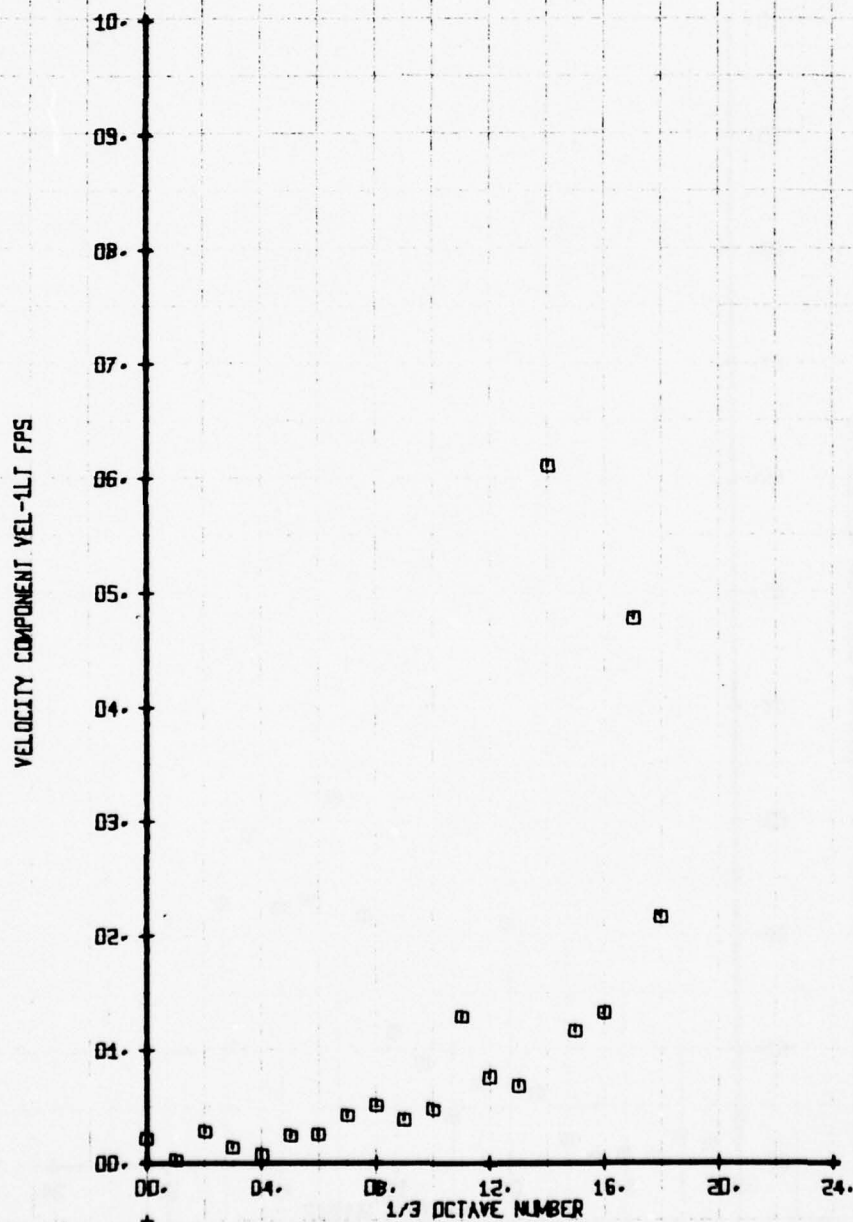
ET 3
 WT 169

140

SET 3
 BVWT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE THROUGH VORTEX
 RUN 113 TP 4

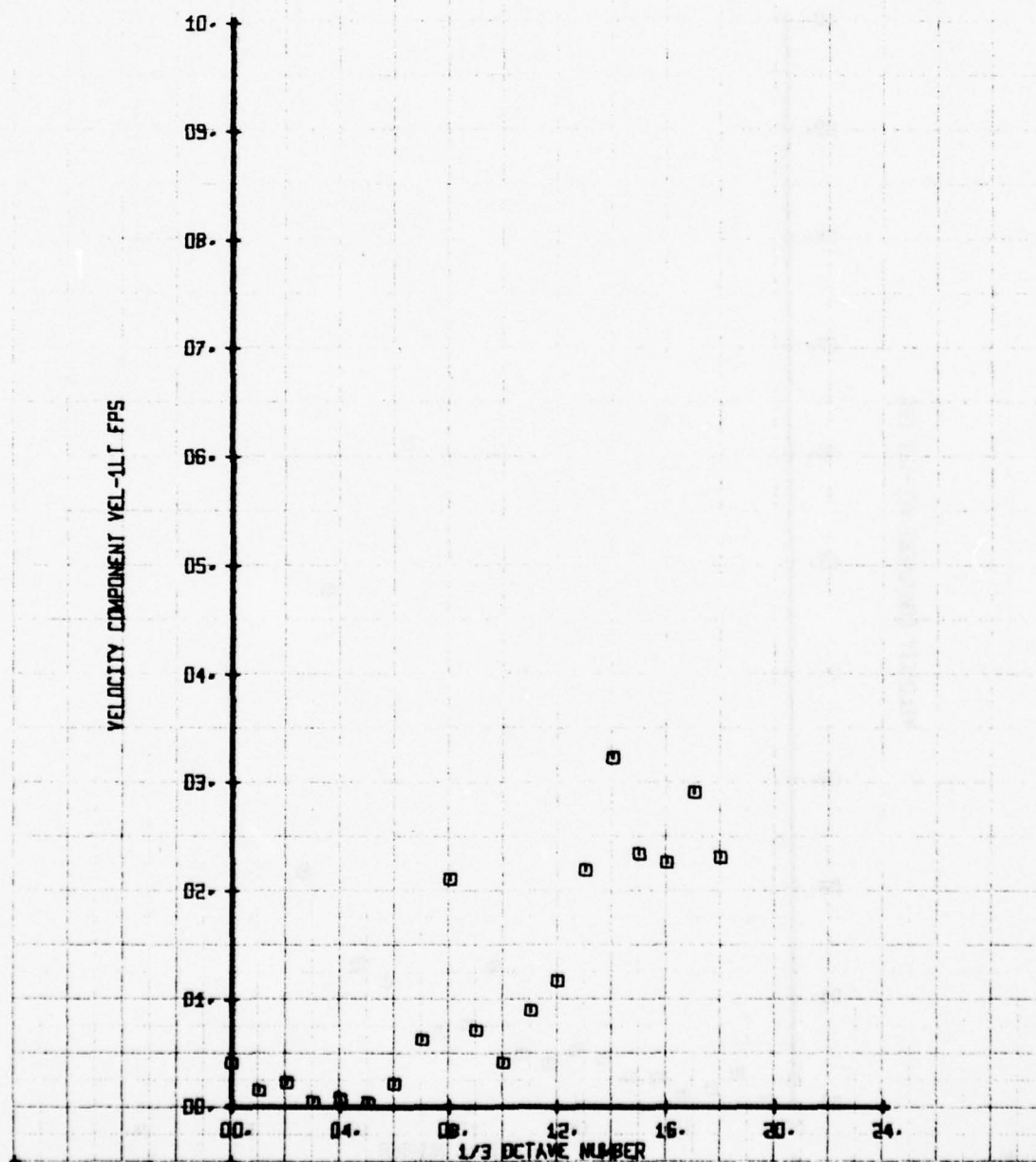
SYM	CH	LEGEND	PARAMETER
□	73		VEL-1LT



ET 3
 WT 169

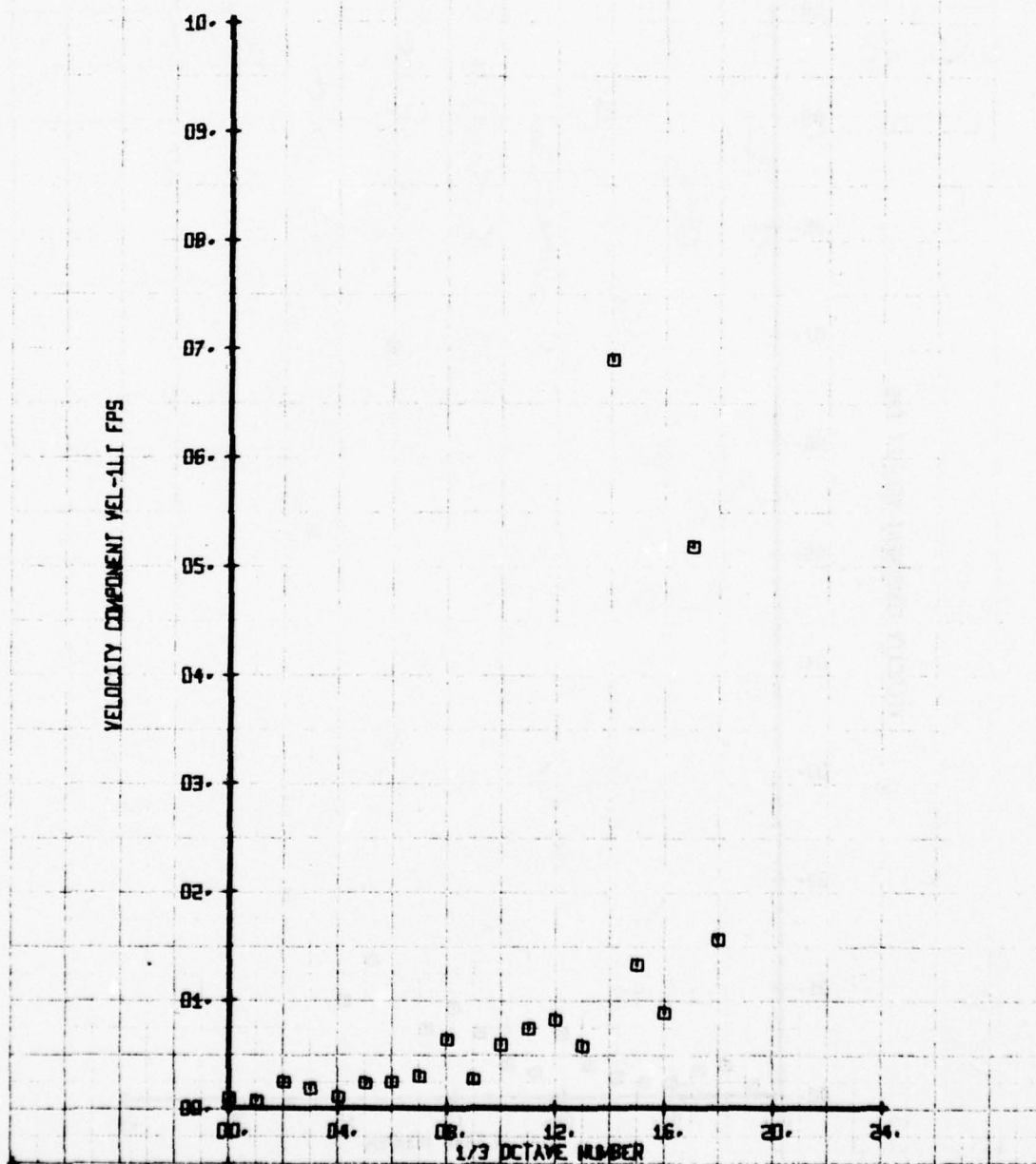
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE THROUGH VORTEX
RUN 113 TP 6

LEGEND
SYM CH PARAMETER
□ 73 VEL-1LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE THROUGH VORTEX
 RUN 113 TP B

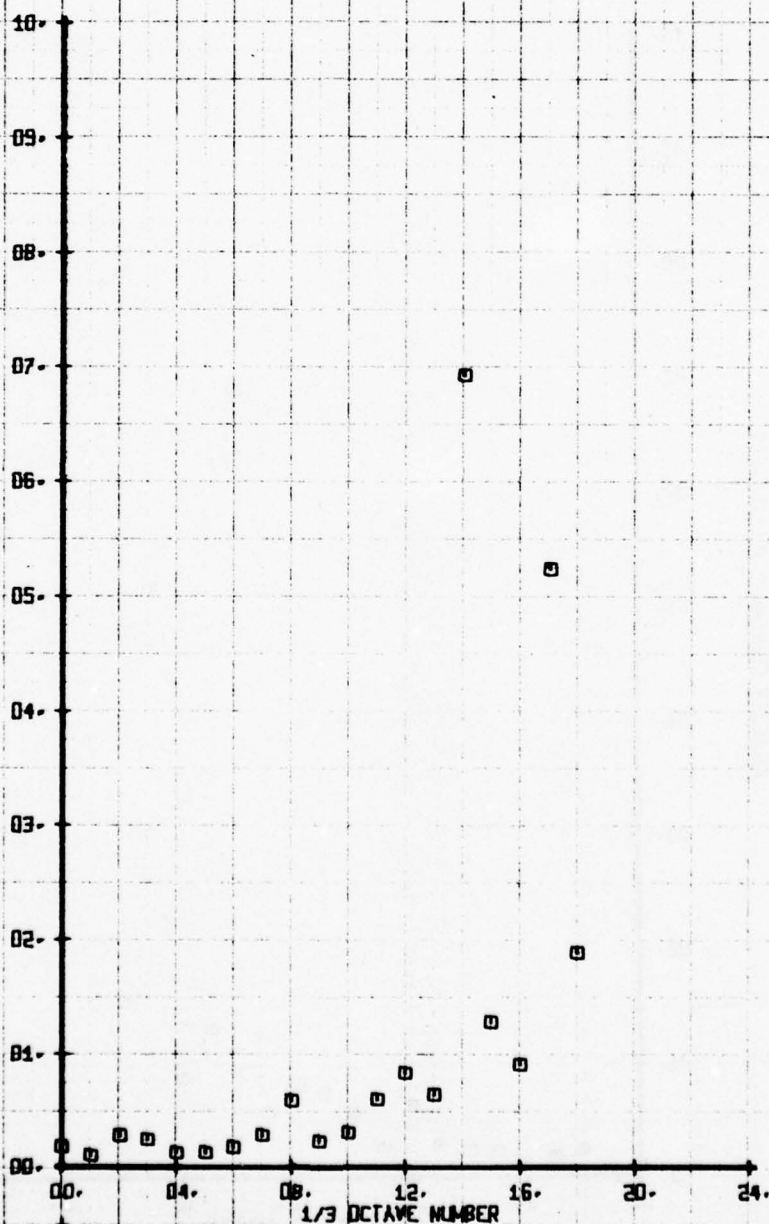
LEGEND
 S/M CH PARAMETER
 0 73 VEL-1LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE THROUGH VORTEX
 RUN 113 TP 10

SYM	CH	PARAMETER
□	73	VEL-1LT

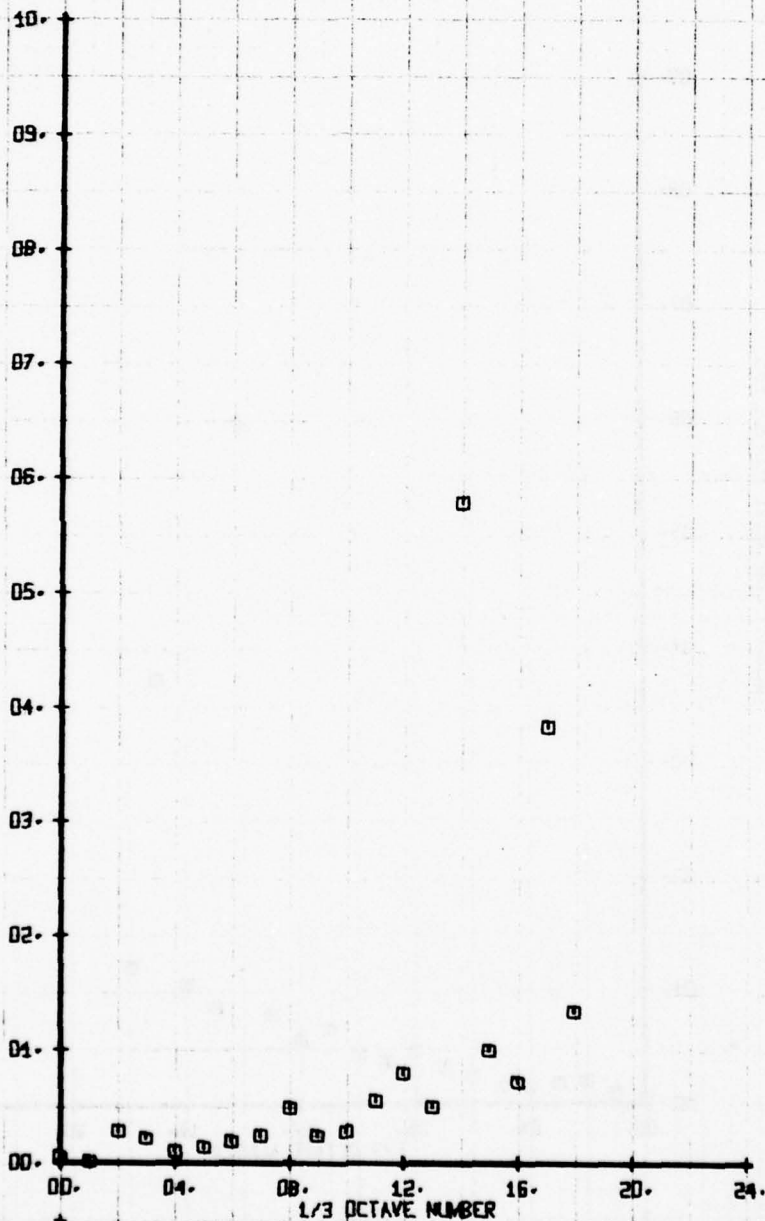
VELOCITY COMPONENT VEL-1LT FPS



NOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE THROUGH VORTEX
 RUN 113 TP 11

SYM	CH	LEGEND	PARAMETER
□	73		VEL-1LT

VELOCITY COMPONENT VEL-1LT FPS



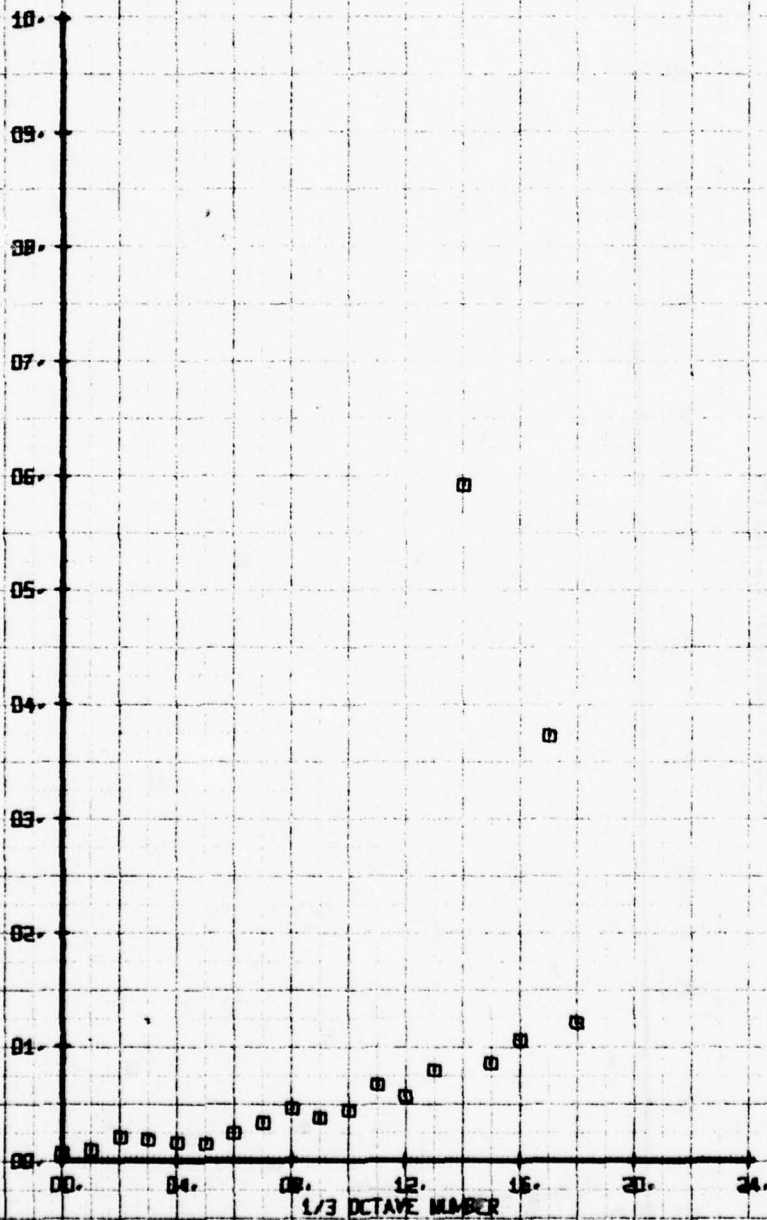
145

SET 3
 BVWT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE THROUGH VORTEX
 RUN 113 TP 2

SYN CH
 0 72
 LEGEND
 PARAMETER
 VEL-2LT

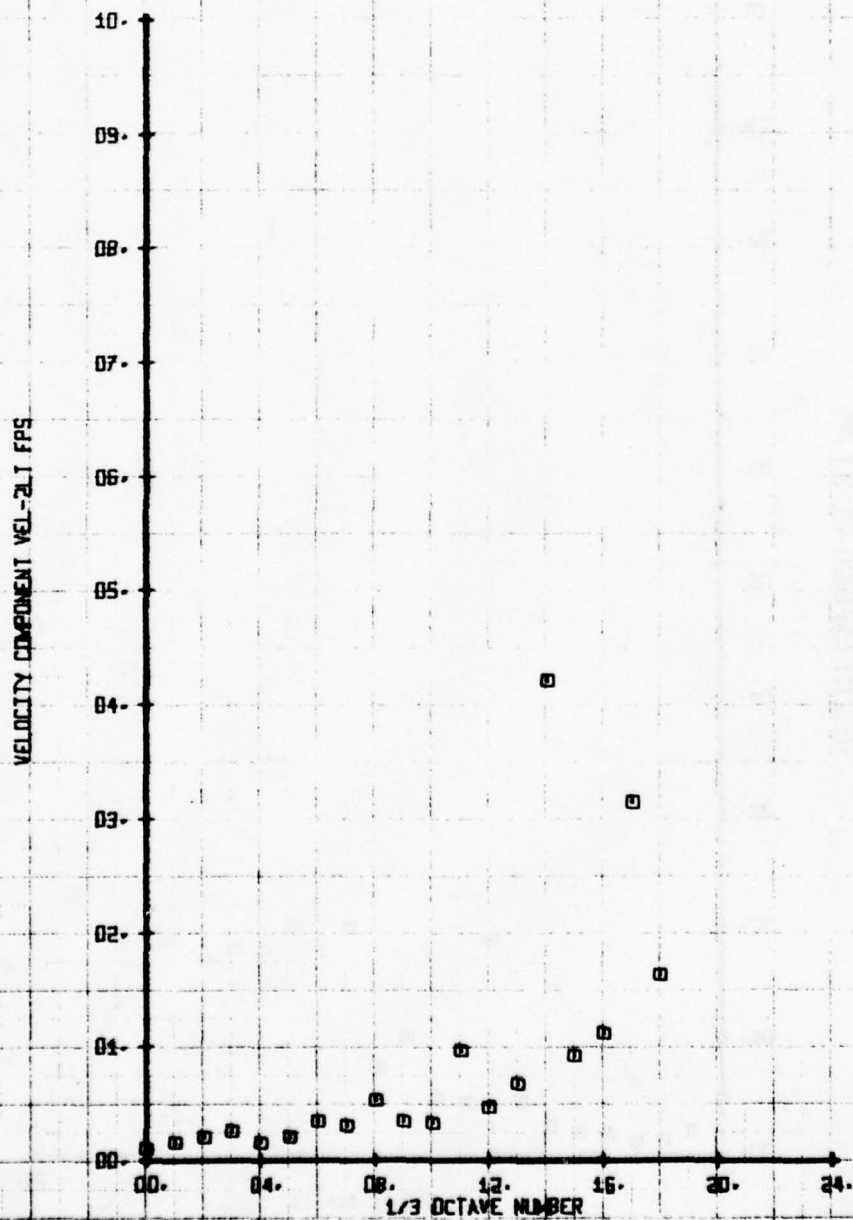
VELOCITY COMPONENT VEL-2LT FPS



ET 3
 WT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE THROUGH VORTEX
 RUN 113 TP 4

LEGEND
 SYM CH PARAMETER
 □ 72 VEL-ZLT

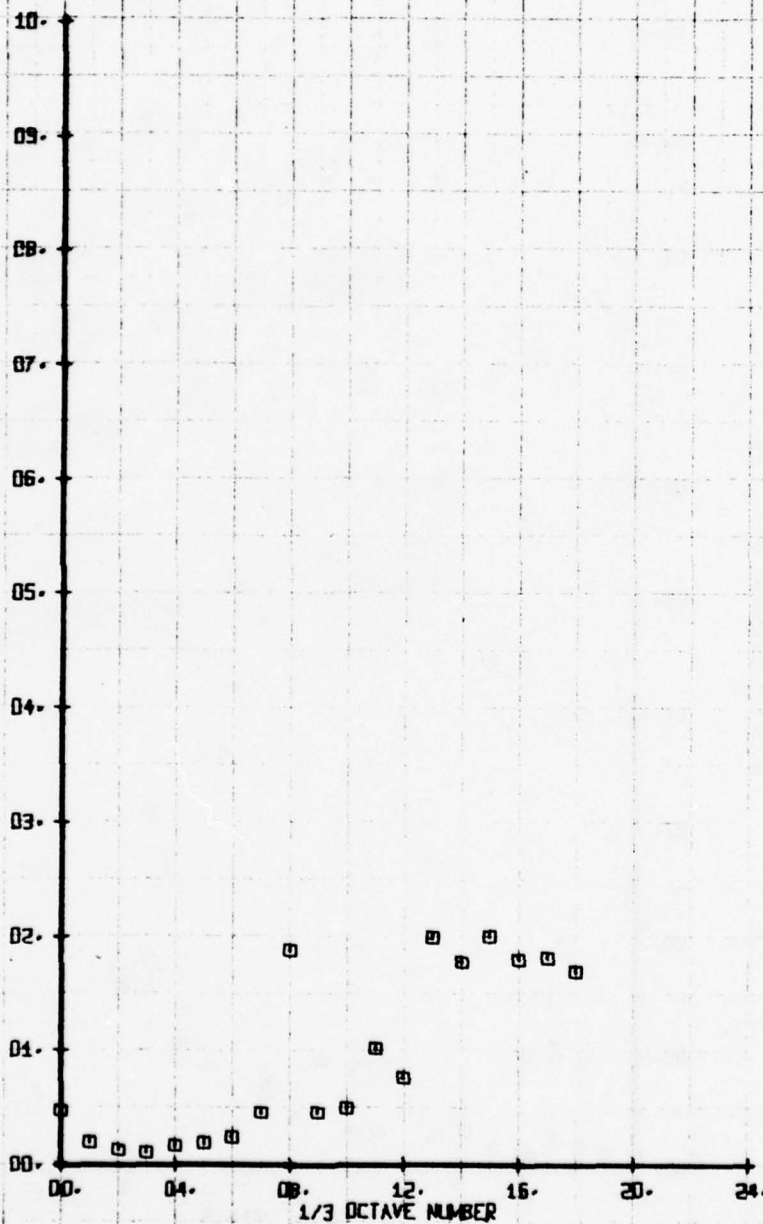


HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE THROUGH VORTEX
 RUN 113 TP 6

SYM
 □

LEGEND
 CH 72
 PARAMETER
 VEL-2LT

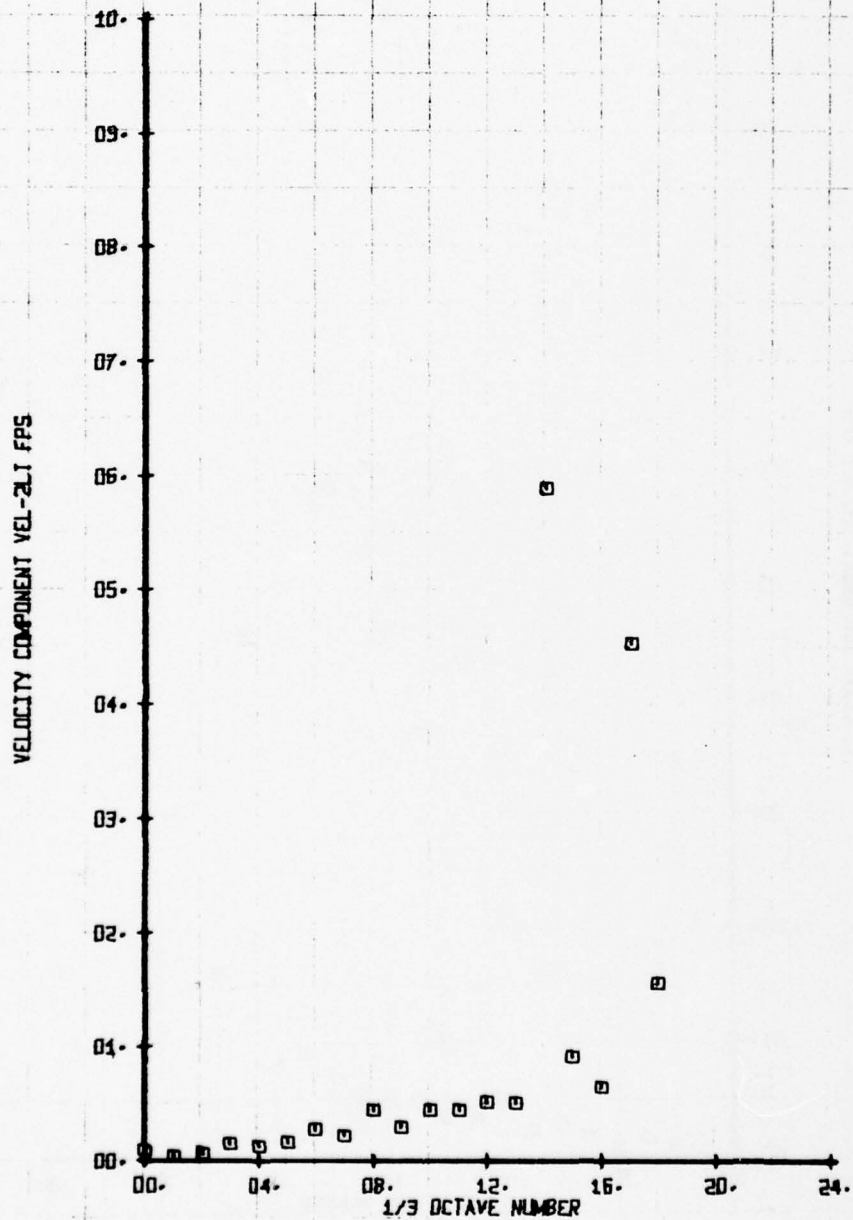
VELOCITY COMPONENT VEL-2LT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE THROUGH VORTEX
 RUN 113 TP B

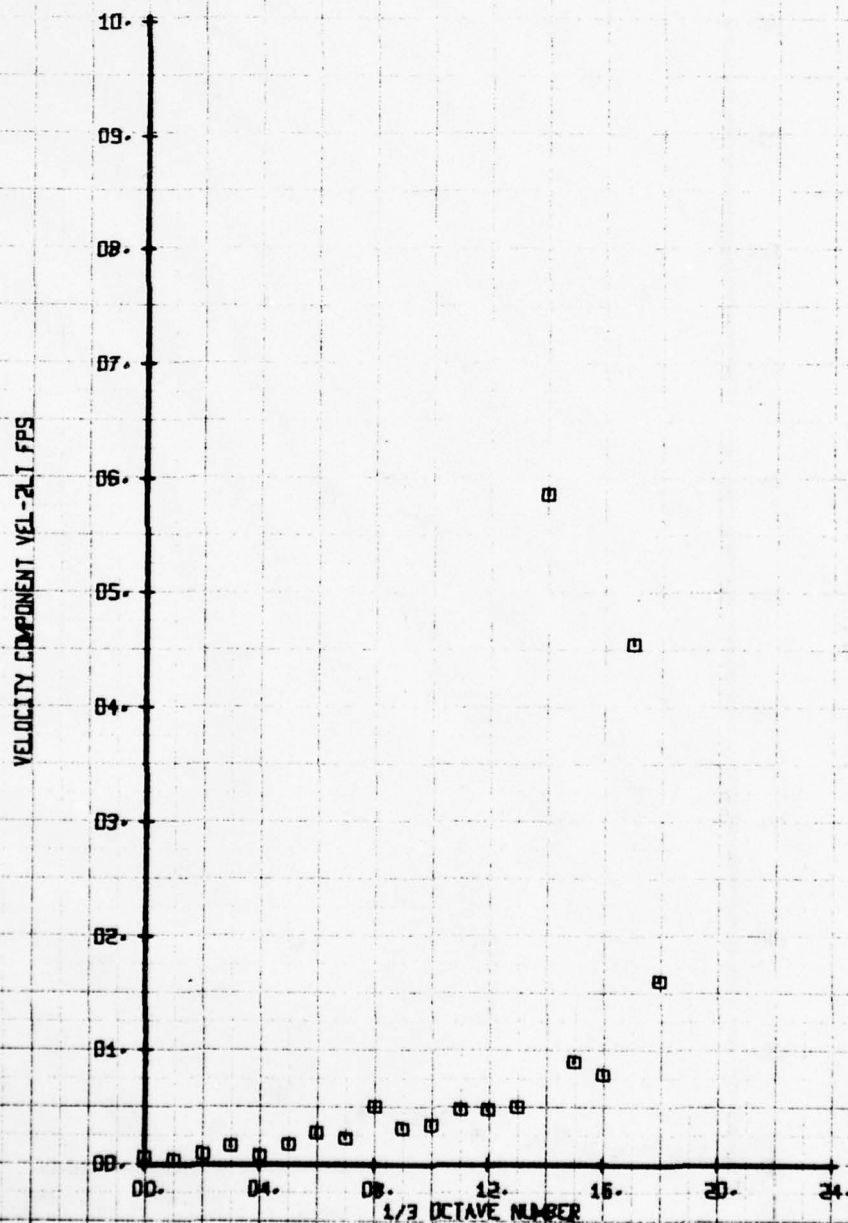
SYM
 □

LEGEND
 CH 72
 PARAMETER
 VEL-2LT



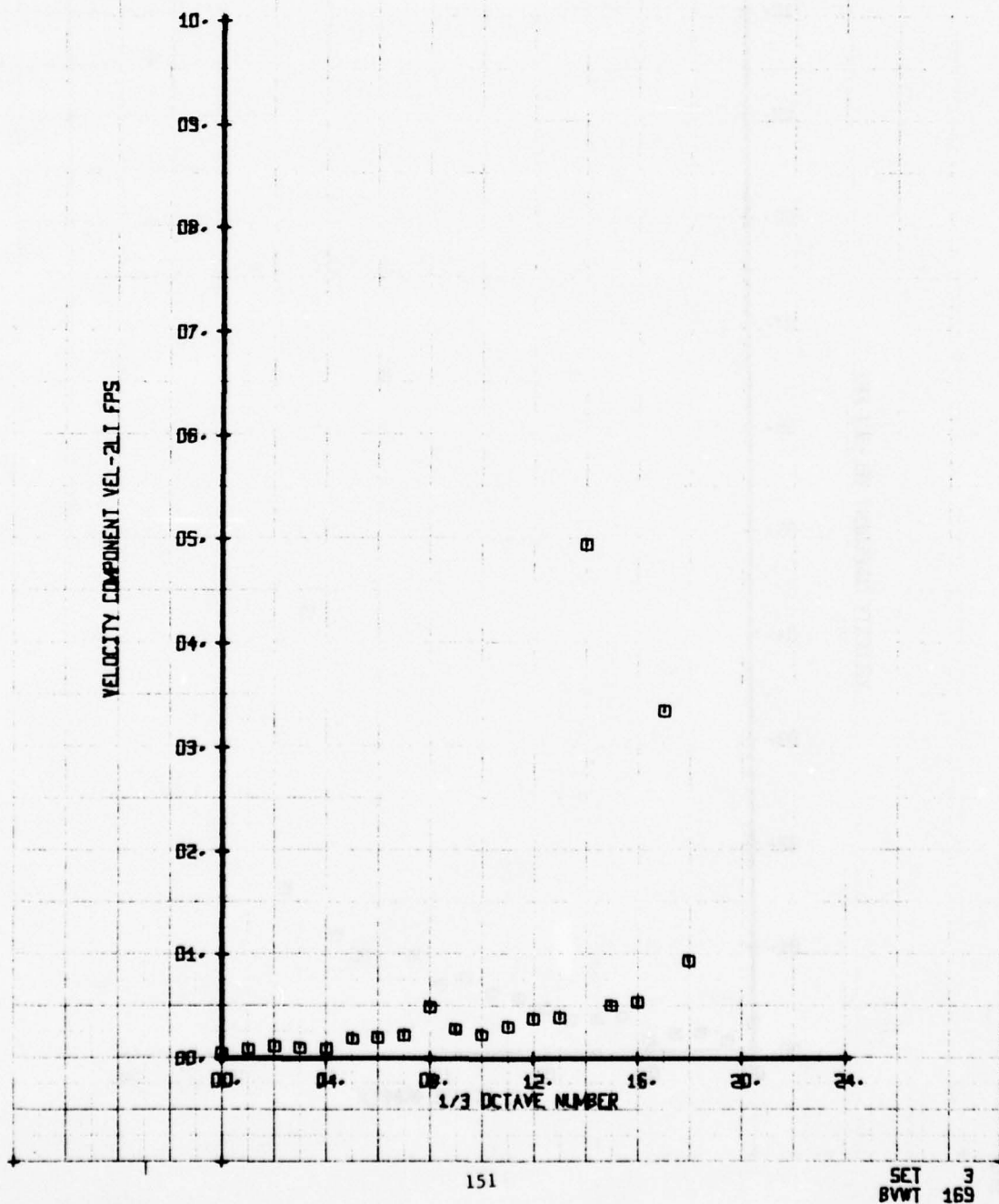
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE THROUGH VORTEX
RUN 113 TP 10

LEGEND
SYM CH PARAMETER
□ 72 VEL-2LT



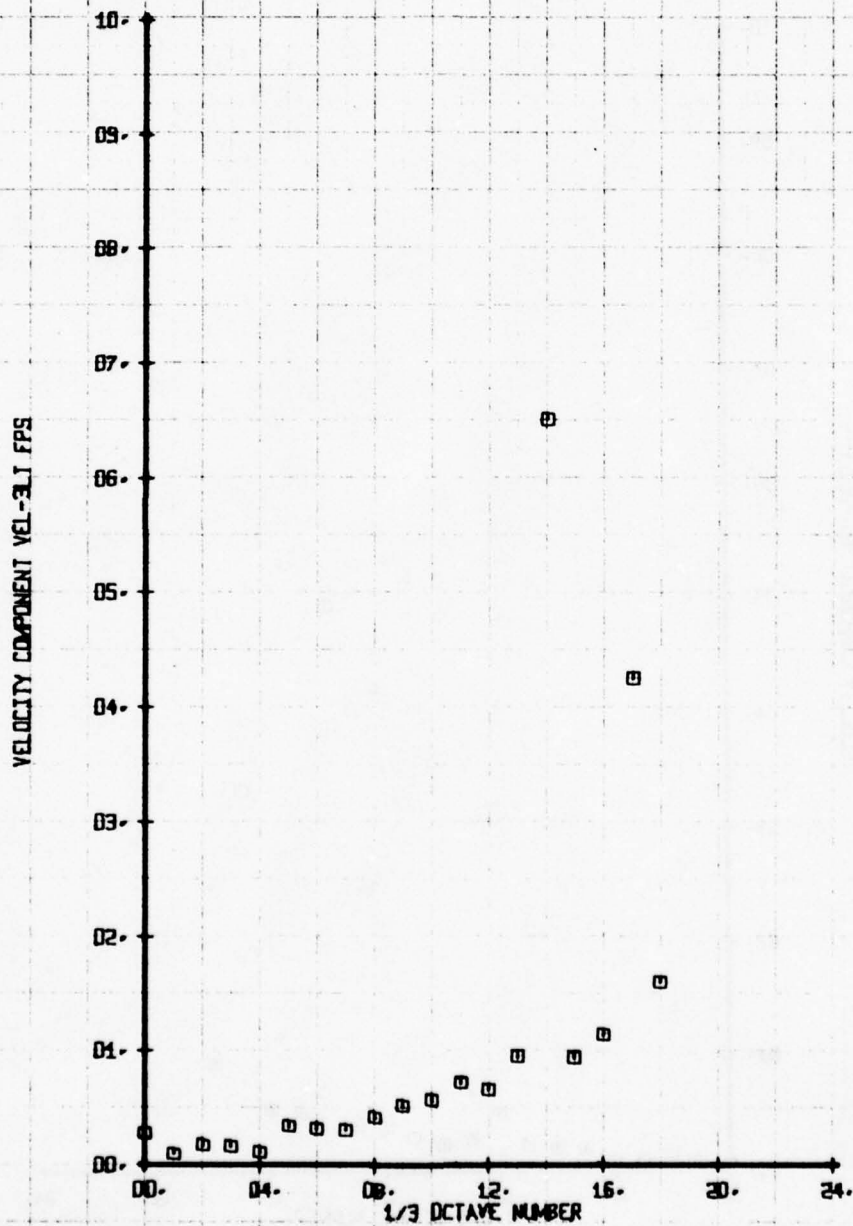
HOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE THROUGH VORTEX
 RUN 113 TP 11

LEGEND
 SYM CH PARAMETER
 0 72 VEL-2LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE THROUGH VORTEX
 RUN 113 TP 2

SYM CH PARAMETER
 0 70 VEL-3LT



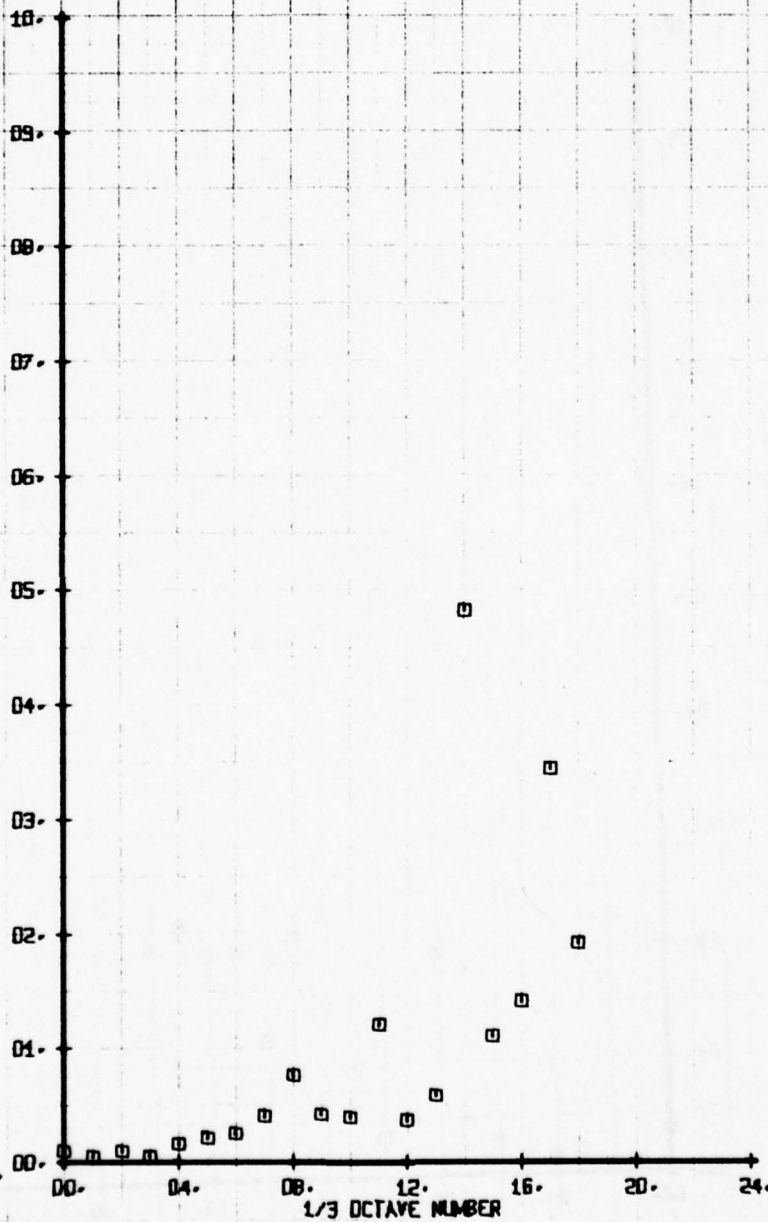
NOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIS. TRAVERSE THROUGH VORTEX
 RUN 113 TP 4

SYM
 □

CH
 70

LEGEND
 PARAMETER
 VEL-3LT

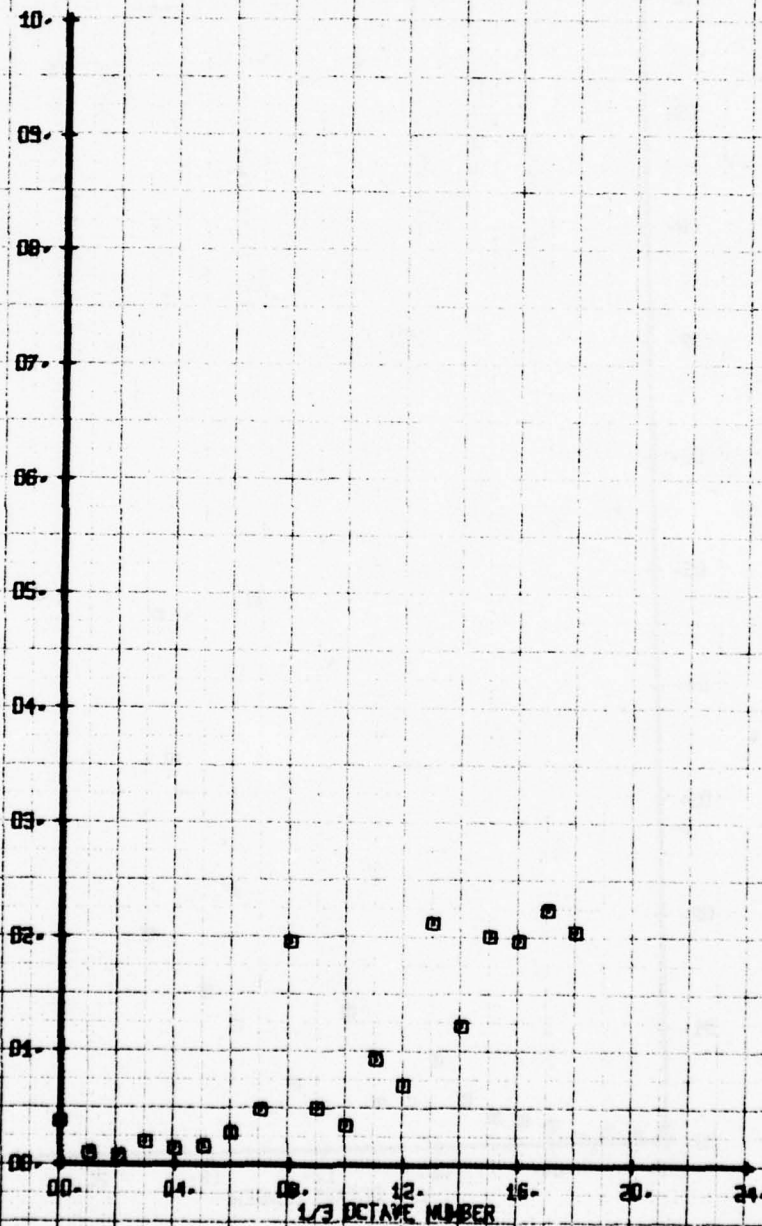
VELOCITY COMPONENT VEL-3LT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE THROUGH VORTEX
 RUN 113 TP 6

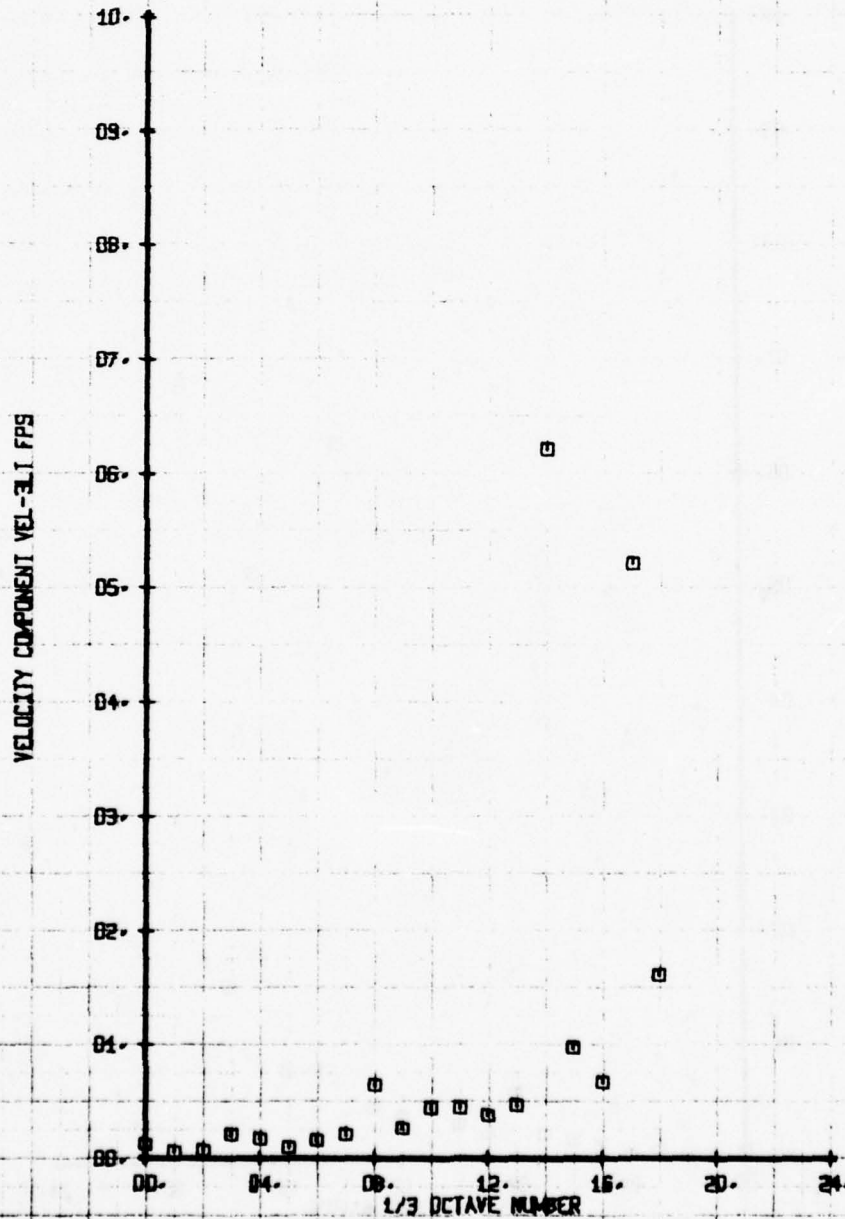
SYN CH
 0 70
 LEGEND
 PARAMETER
 VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS



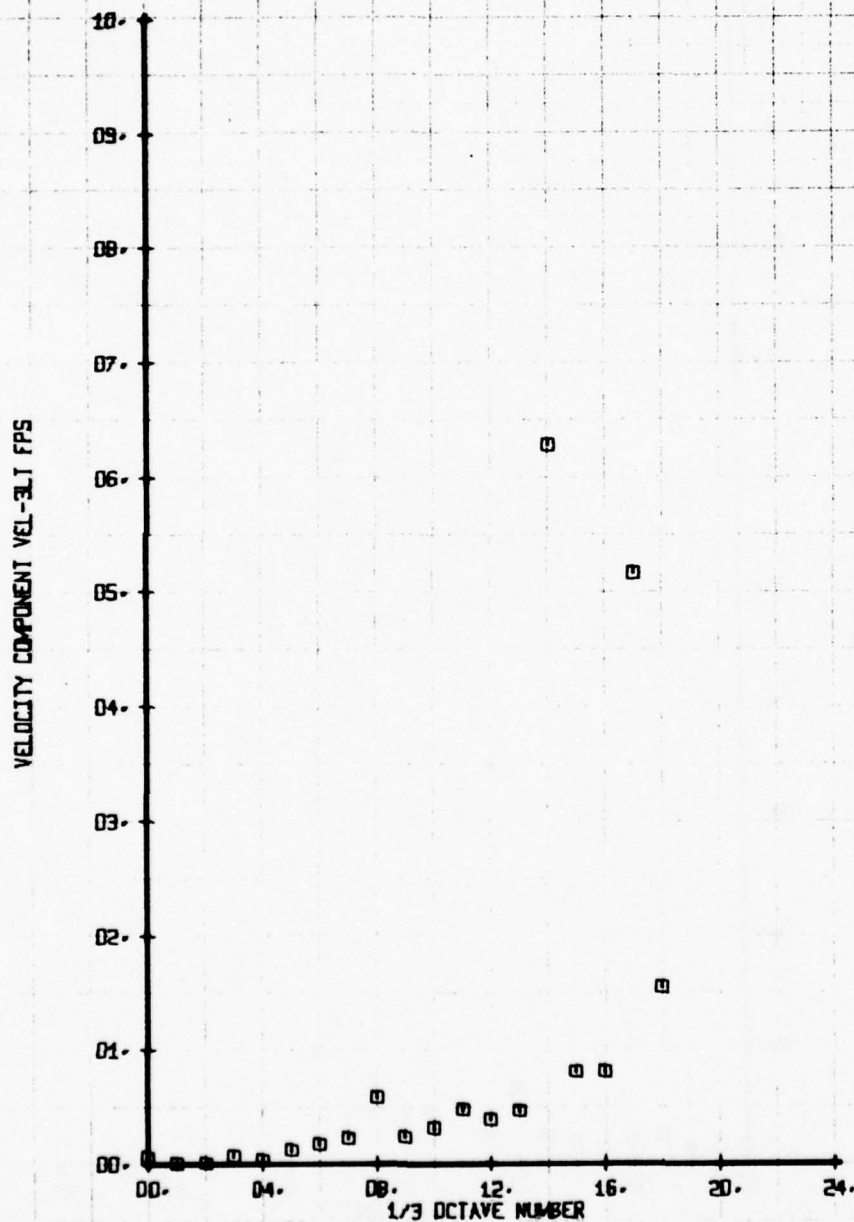
HOT FILM WARE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE THROUGH VORTEX
 RUN 113 TP B

LEGEND
 SYM CH PARAMETER
 □ 70 VEL-3LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE THROUGH VORTEX
 RUN 113 TP 10

SYN CH LEGEND
 0 70 VEL-3LT



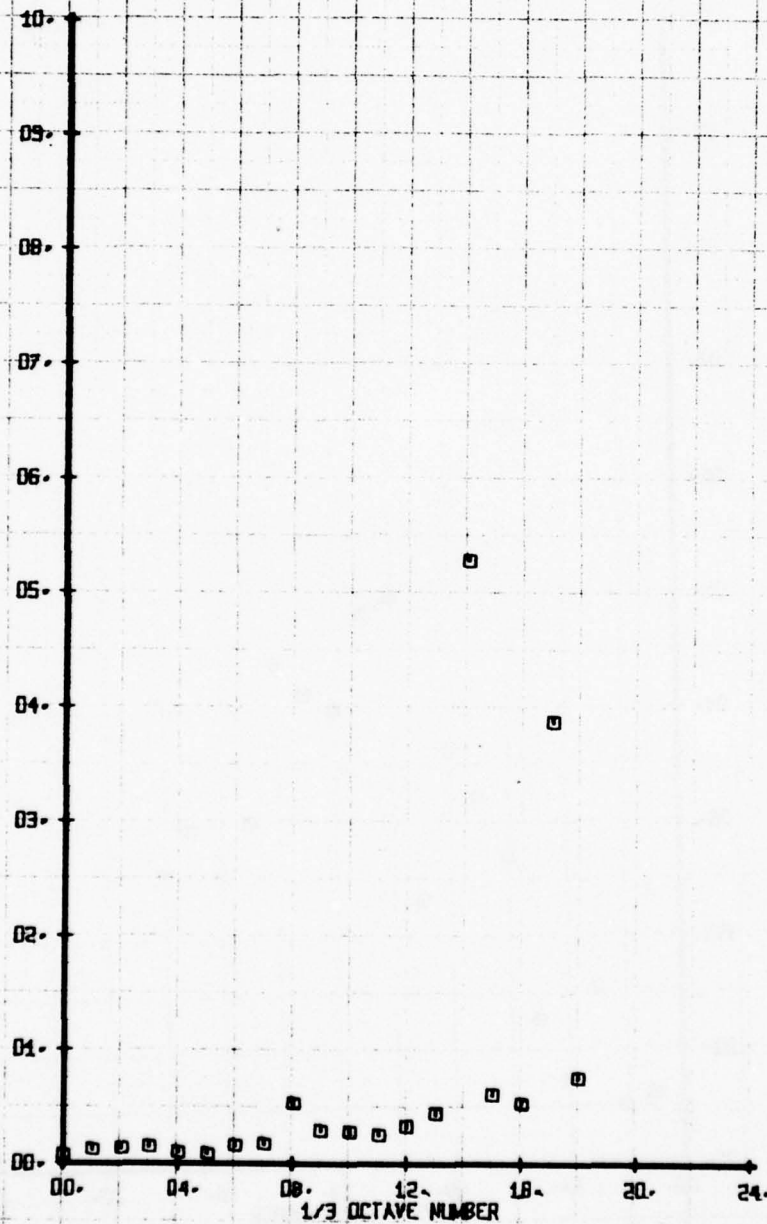
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE THROUGH VORTEX
 RUN 113 TP 11

SYM
 □

CH
 70

LEGEND
 PARAMETER
 VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS

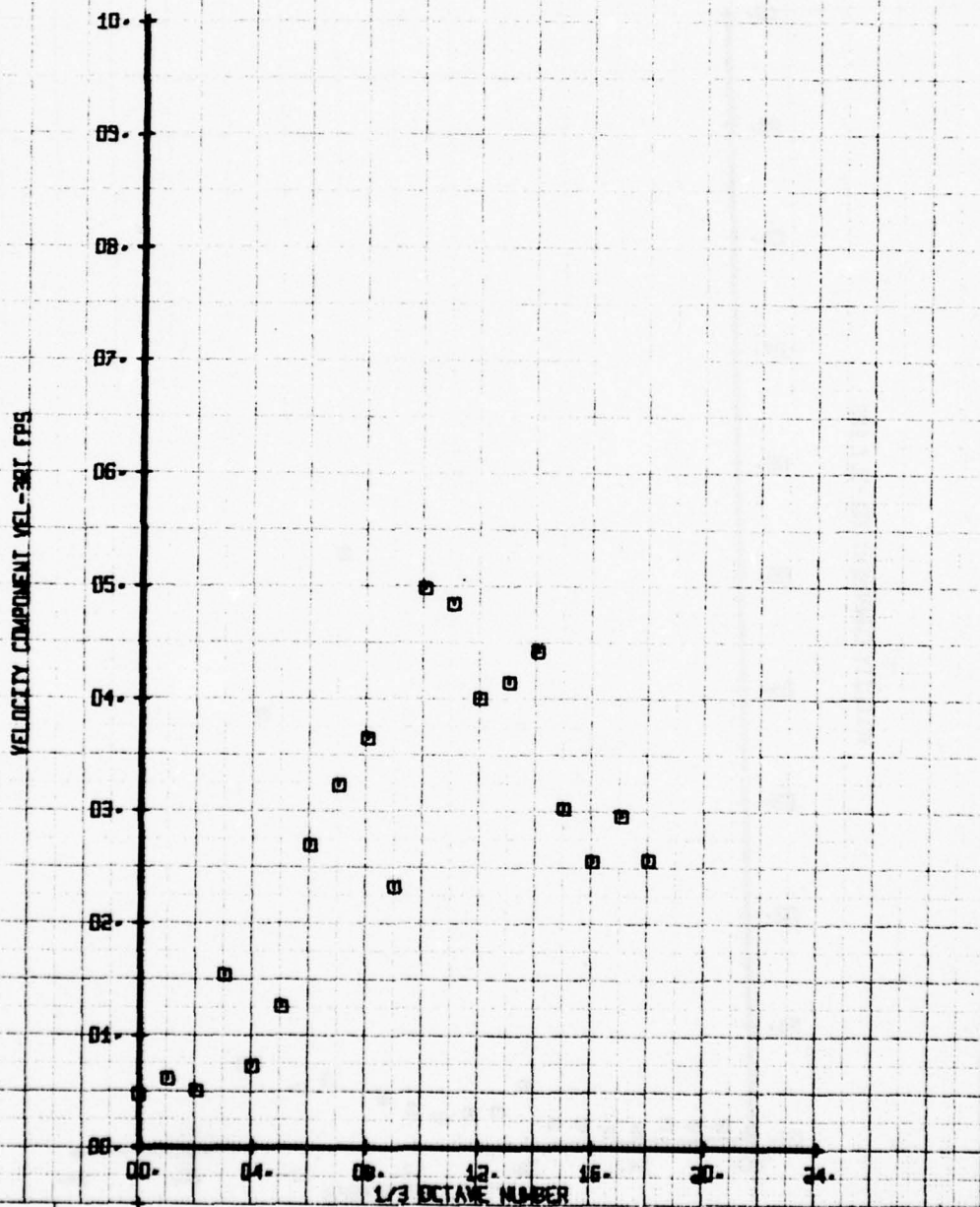


157

SET 3
 BVWT 169

HOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C.L.
 RUN 114 TP 2

SYM CH PARAMETER
 0 71 VEL-3RT



IET 4
 WT 169

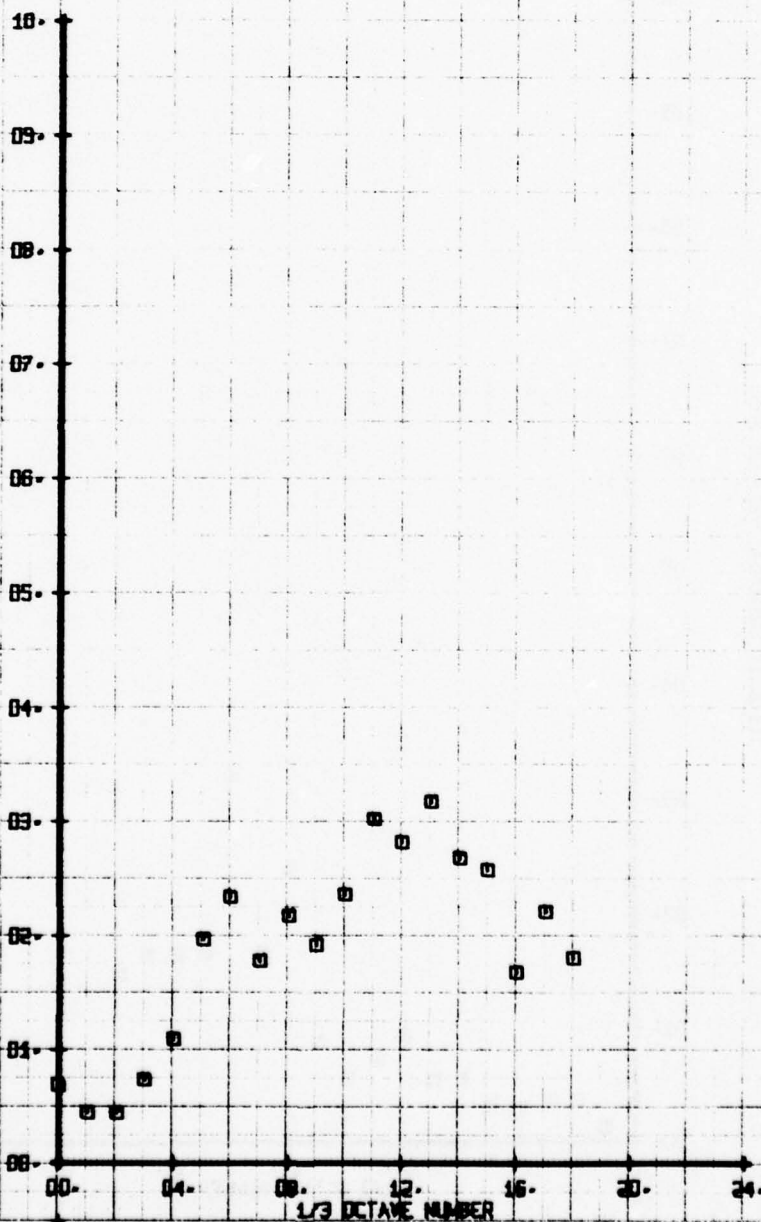
158

SET 4
 BWI 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C-L.
 RUN 114 TP 4

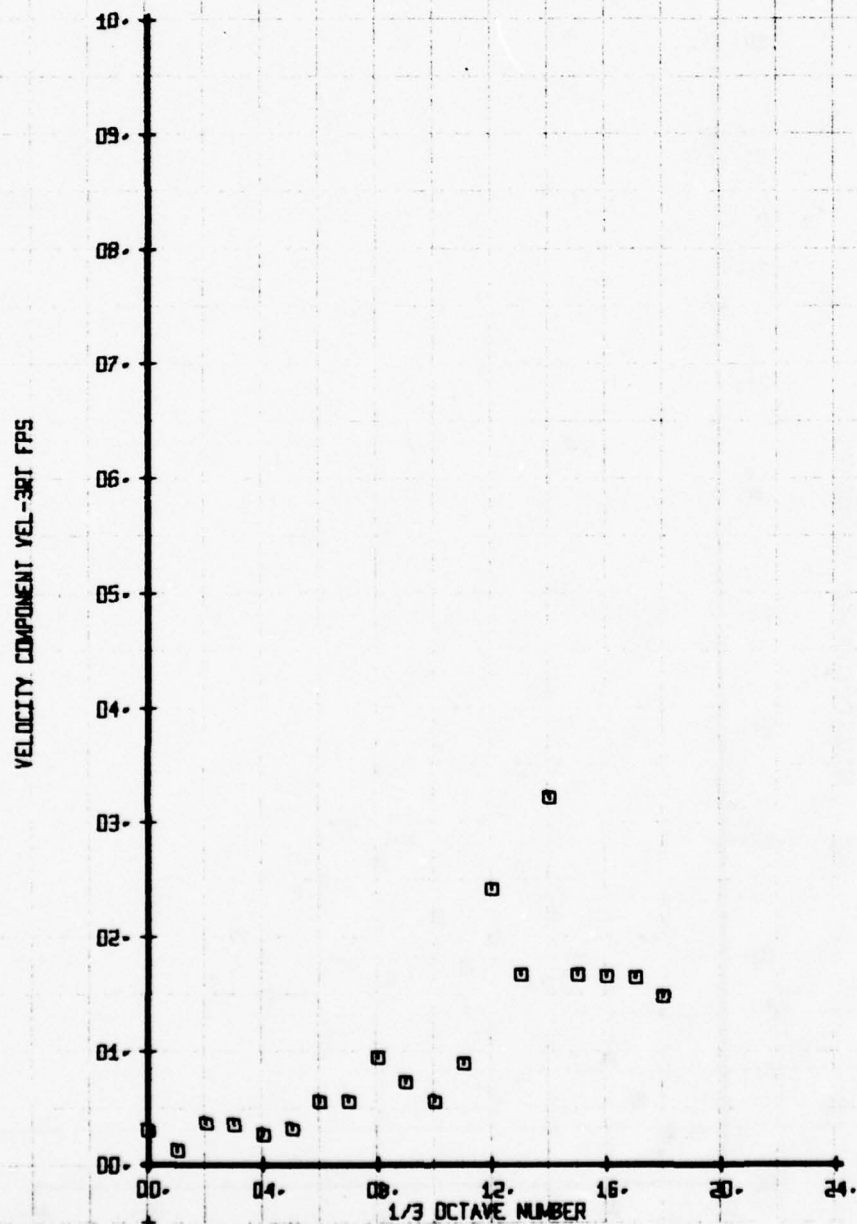
LEGEND		
SYM	CH	PARAMETER
□	71	VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C.L.
 RUN 114 TP 6

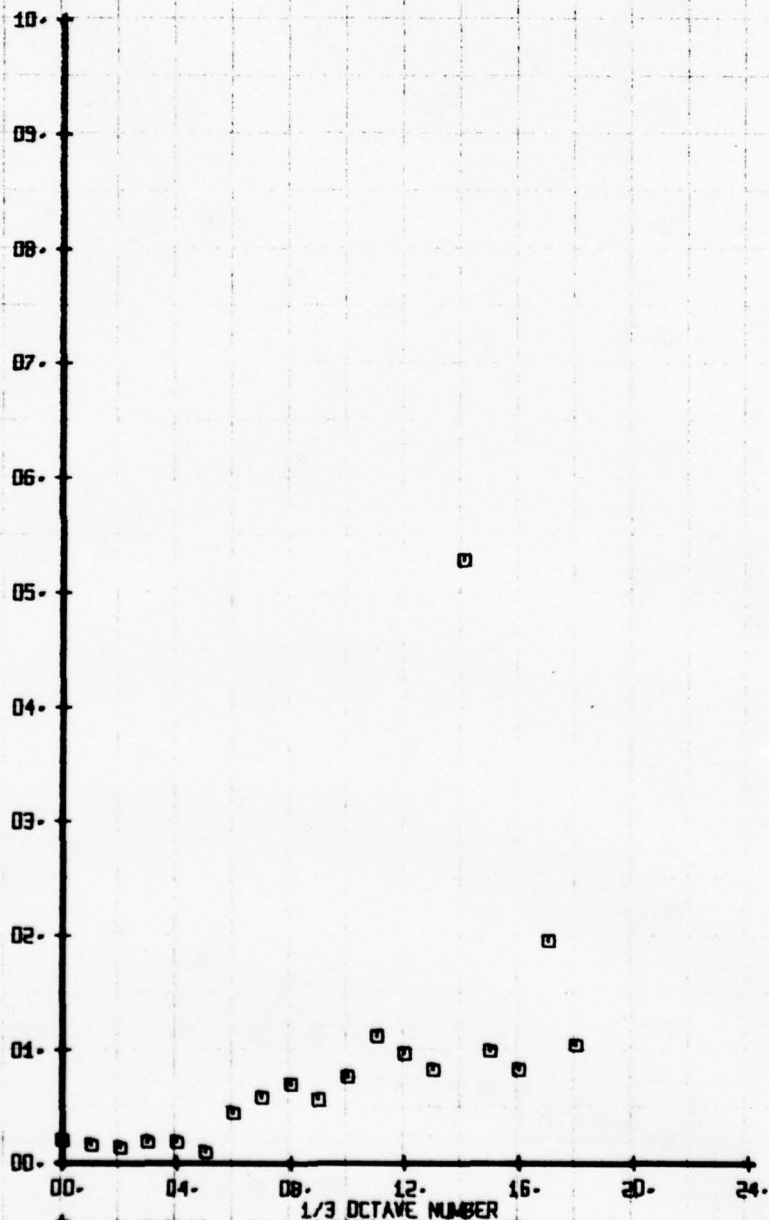
LEGEND
 CH 71
 PARAMETER
 VEL-3RT



NOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C-L.
 RUN 114 TP B

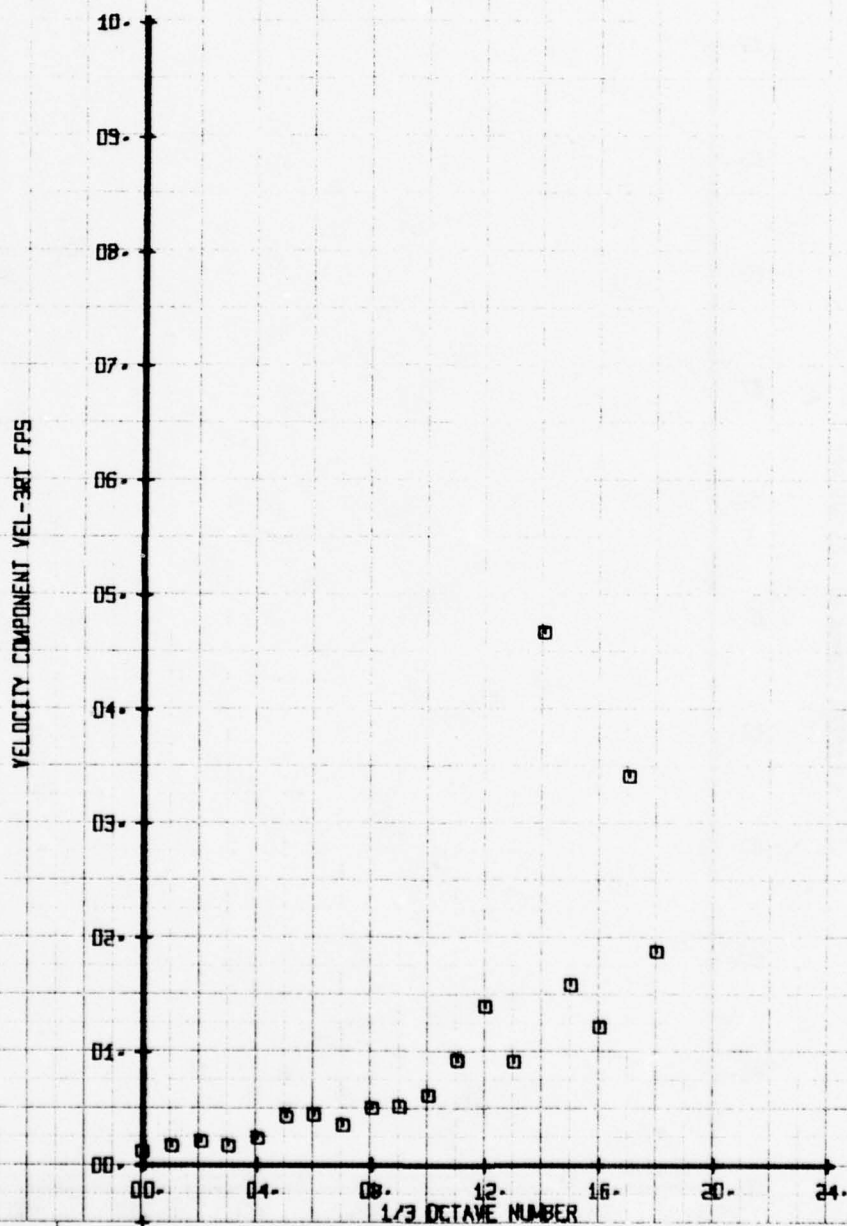
SYM	CH	PARAMETER
□	71	VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS



NOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C-L-
 RUN 114 TP 10

LEGEND		
SYM	CH	PARAMETER
□	71	VEL-3RT

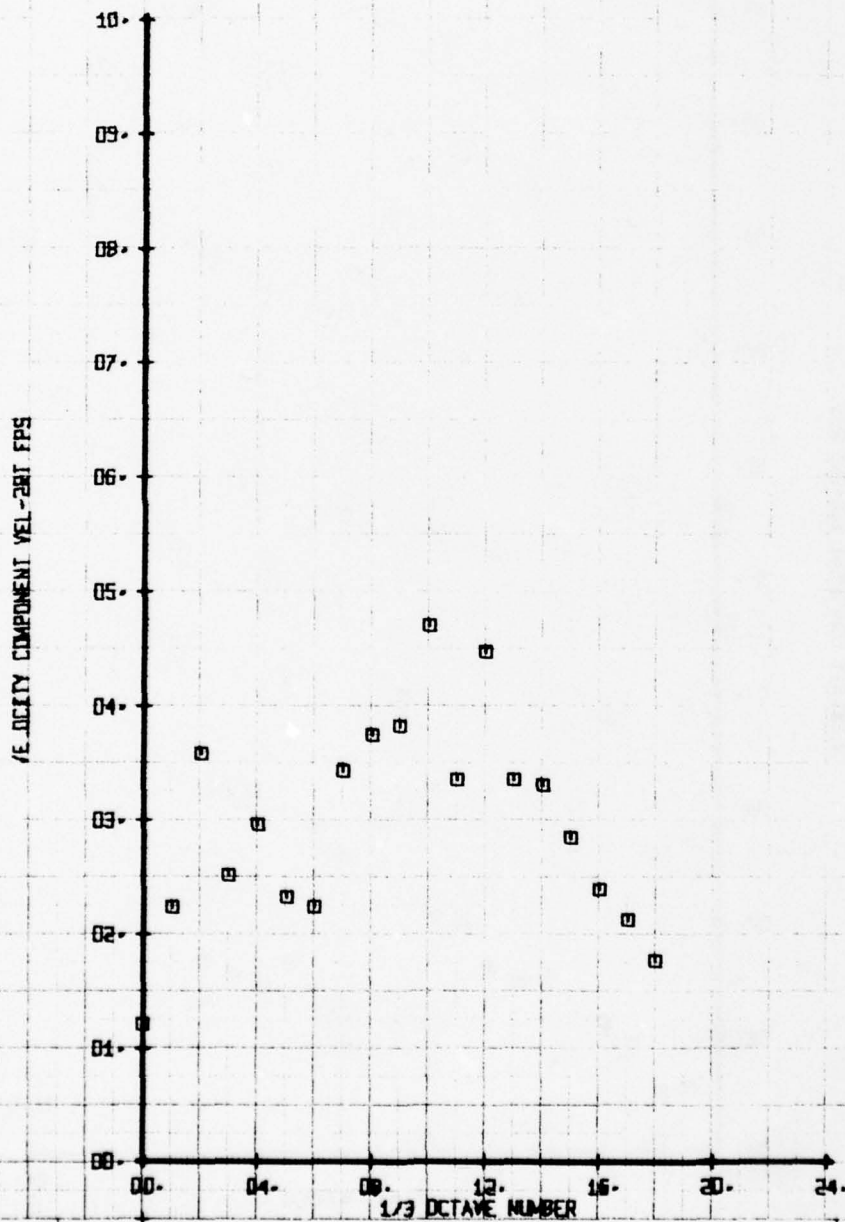


162

SET 4
 BVWT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C-L.
 RUN 114 TP 2

LEGEND
 SYM CH PARAMETER
 □ 75 VEL-2RT



JET 4
 WT 169

163

SET 4
 BVWT 169

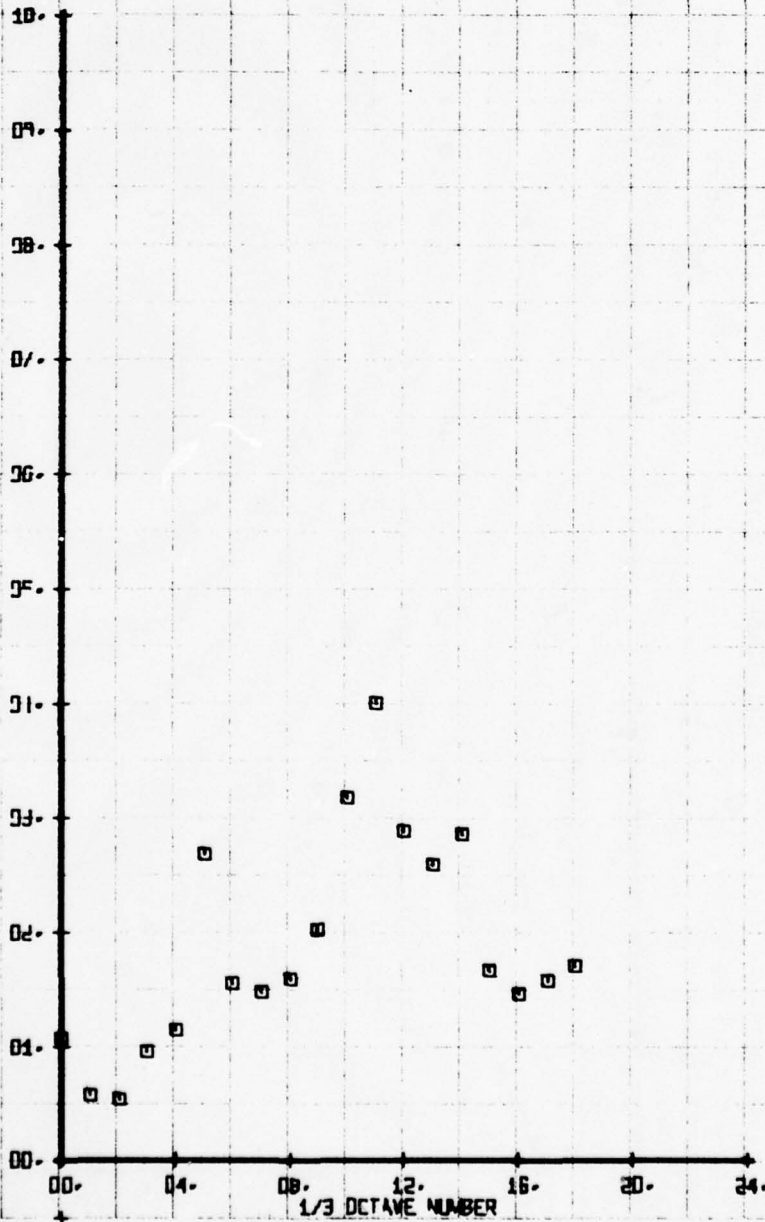
NOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C.L.
 RUN 114 TP 4

SYM
 □

CH
 75

LEGEND
 PARAMETER
 VEL-2RT

VELOCITY COMPONENT VEL-2RT FPS



RET 4
 WT 169

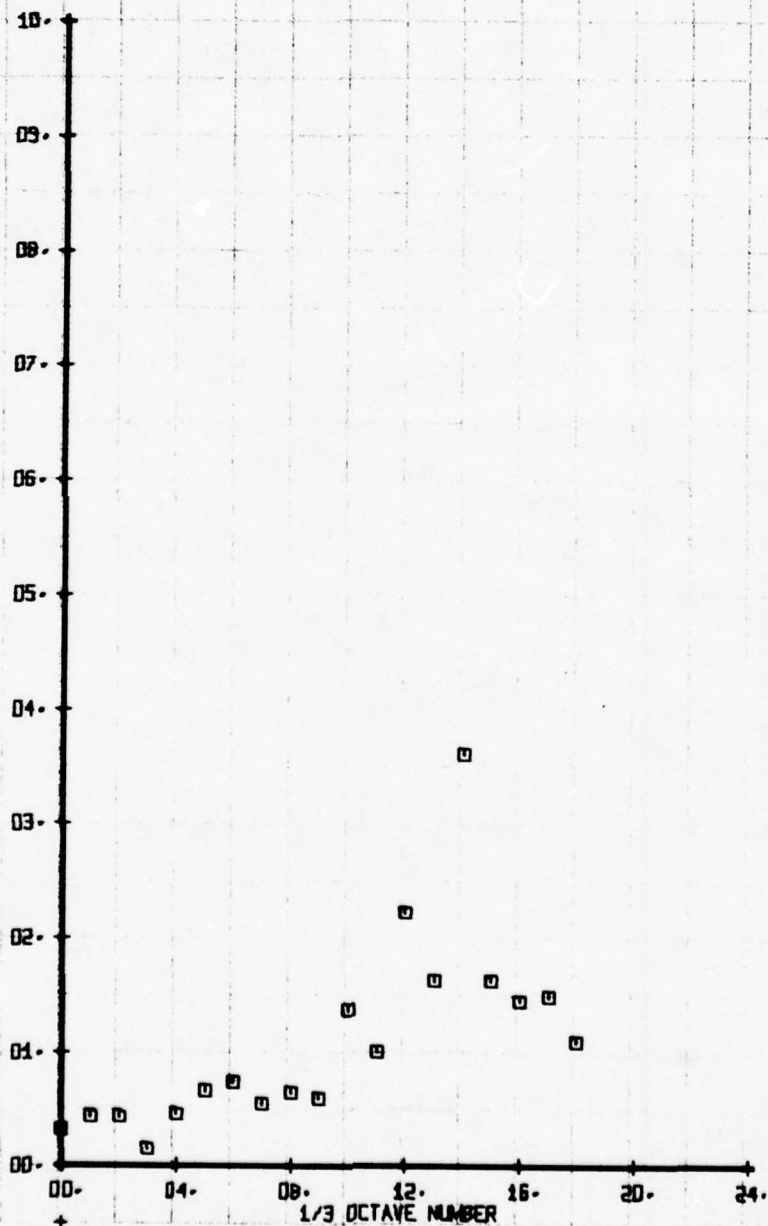
NOT FILM WAVE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE ABOVE T/R C.L.
RUN 114 TP 6

SYM
□

CH
75

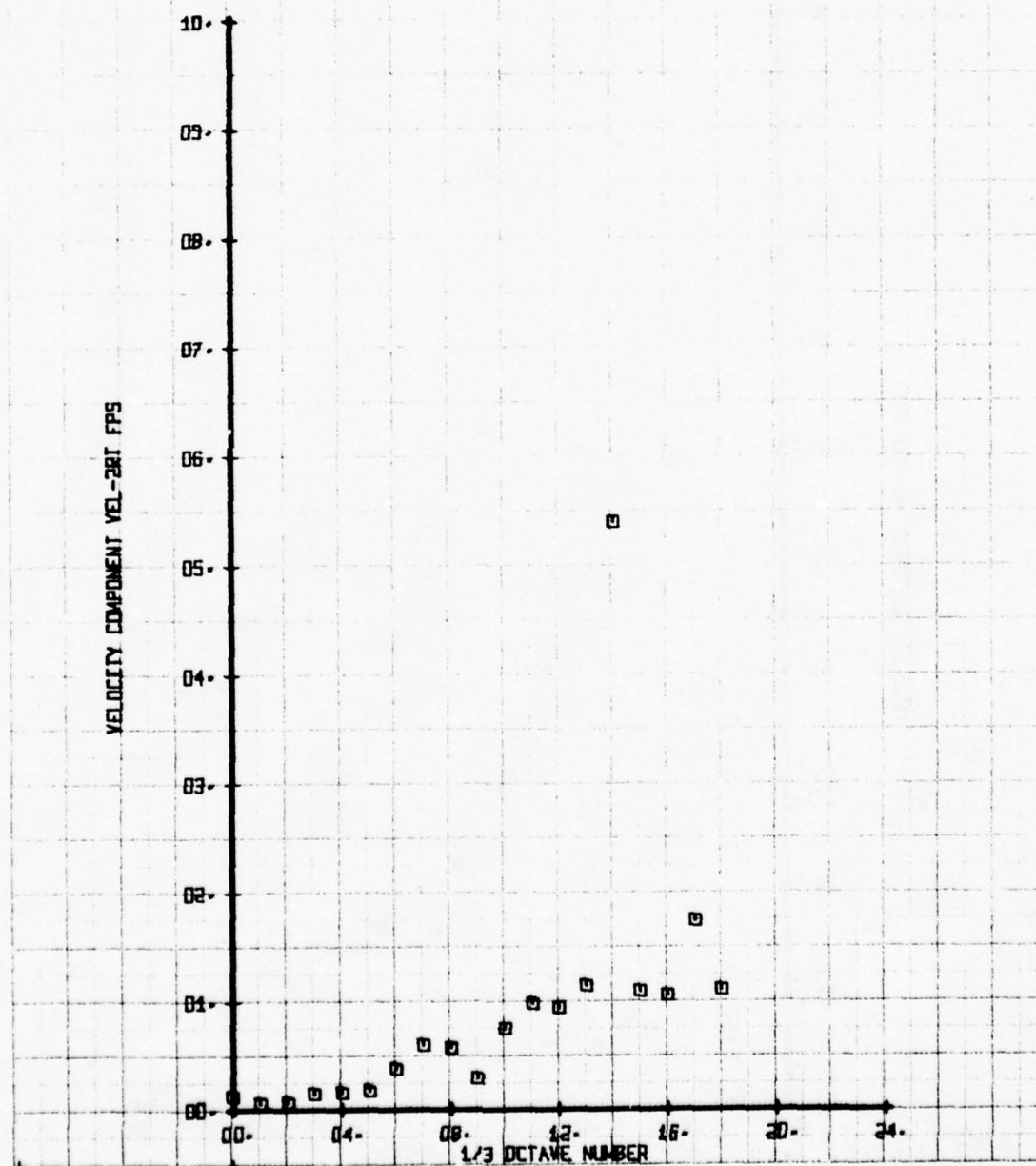
LEGEND
PARAMETER
VEL-2RT

VELOCITY COMPONENT VEL-2RT FPS



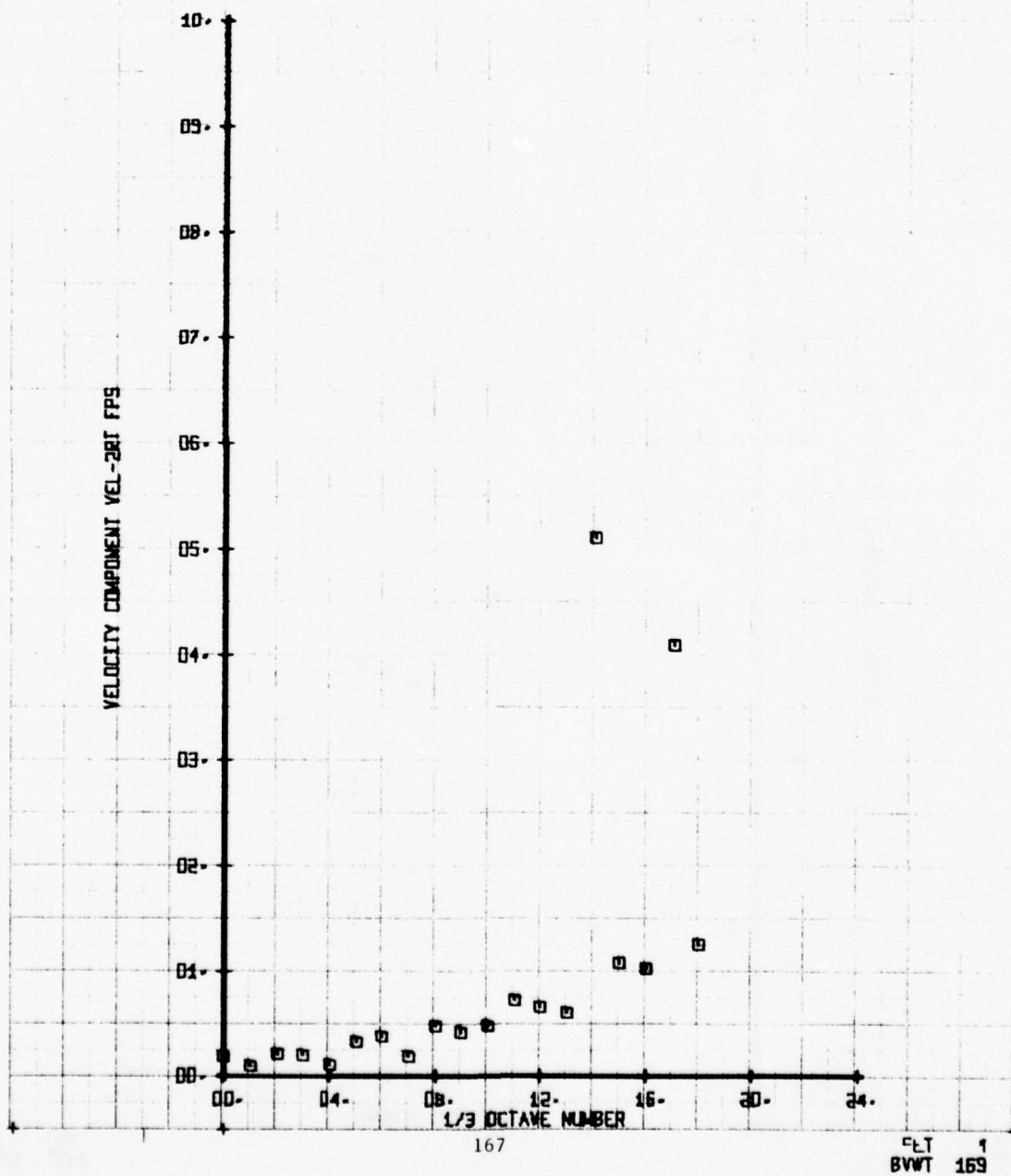
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C-L.
 RUN 114 TP 8

LEGEND		
SYM	CH	PARAMETER
□	75	VEL-2RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C-L.
 RUN 114 TP 10

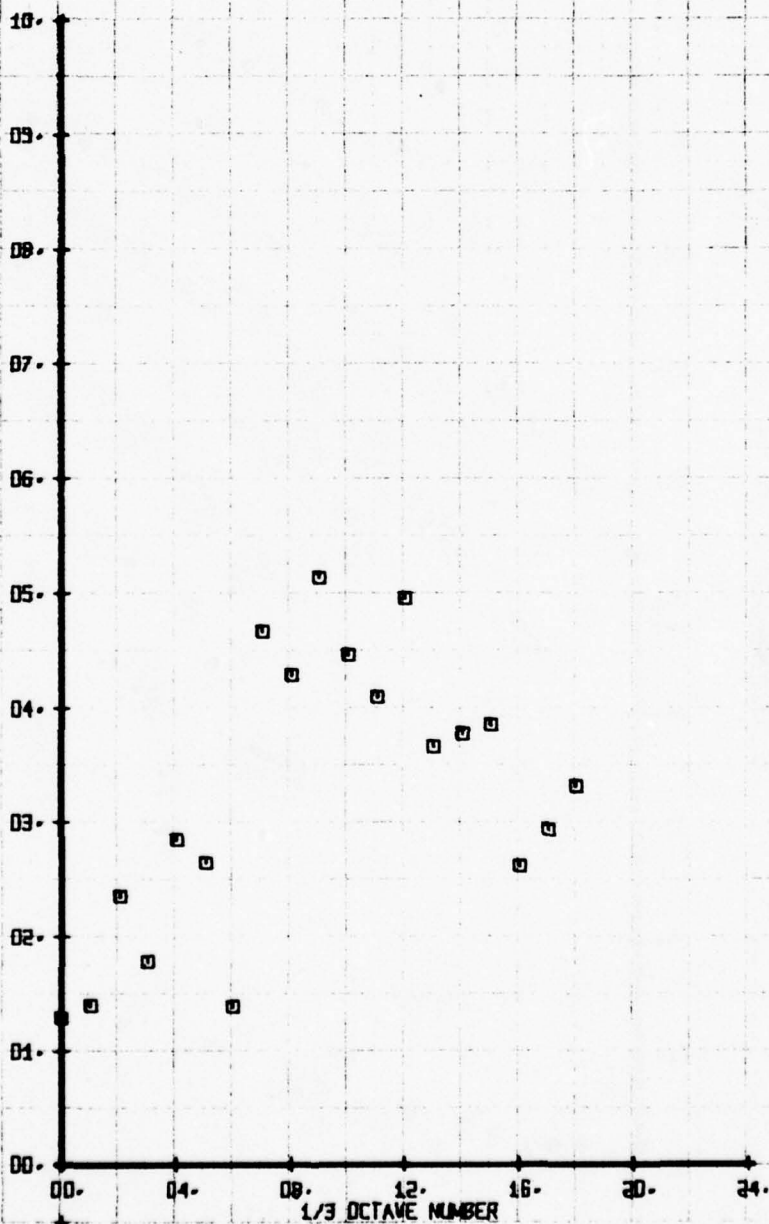
LEGEND
 CH PARAMETER
 75 VEL-2RT



NOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C.L.
 RUN 114 TP 2

LEGEND
 CH 74
 PARAMETER
 VEL-1RT

VELOCITY COMPONENT VEL-1RT FPS



SET 4
 WT 169

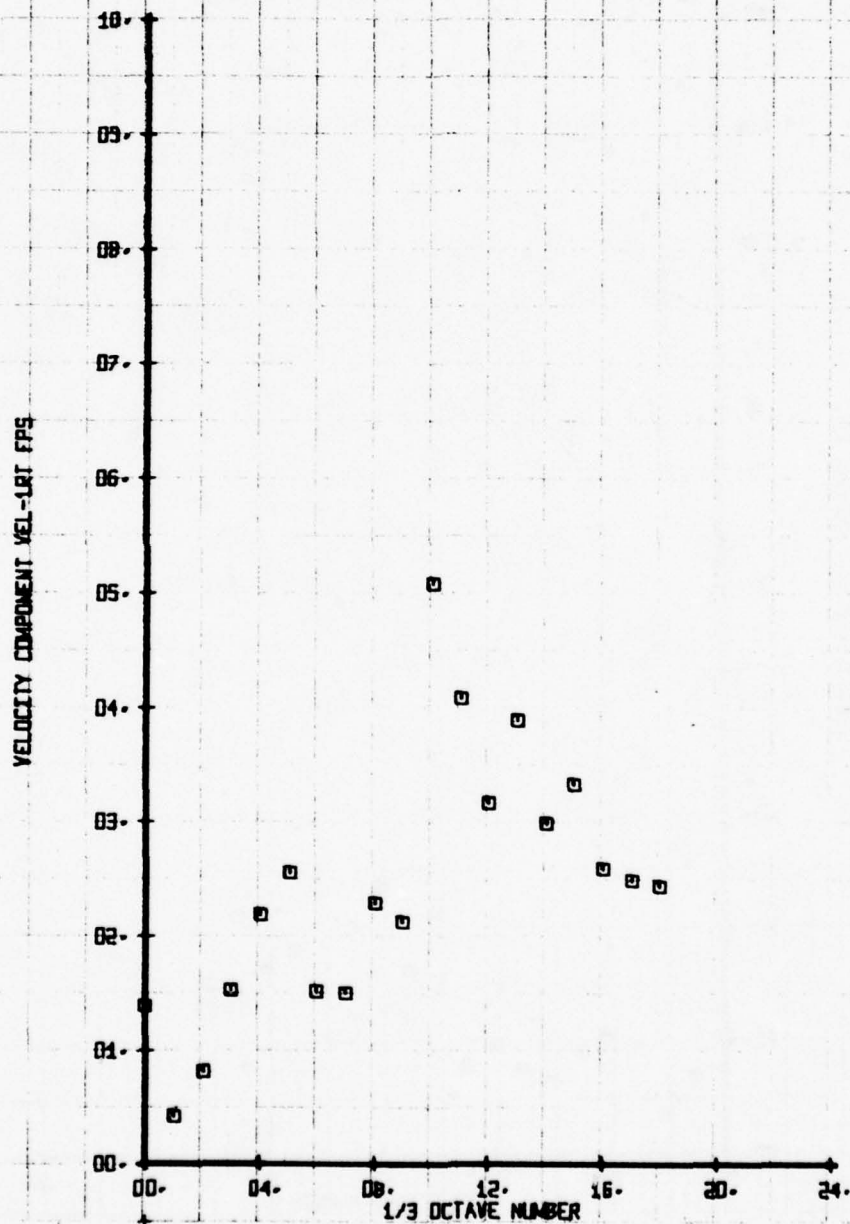
168

SET 4
 BWWT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C.L.
 RUN 114 TP 4

SYM
 □

LEGEND
 CH 74
 PARAMETER
 VEL-1RT



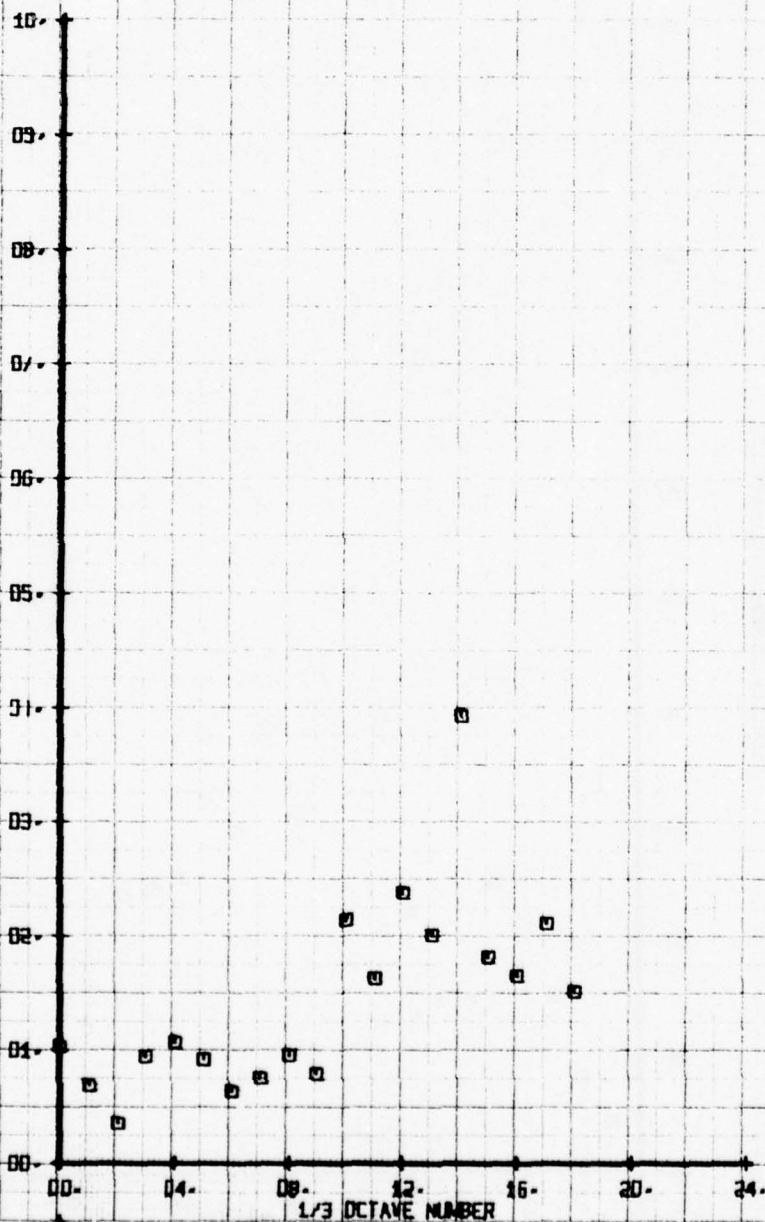
RET 4
 WT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG, TRAVERSE ABOVE T/R C-L.
 RUN 114 TP 5

SYM
 □

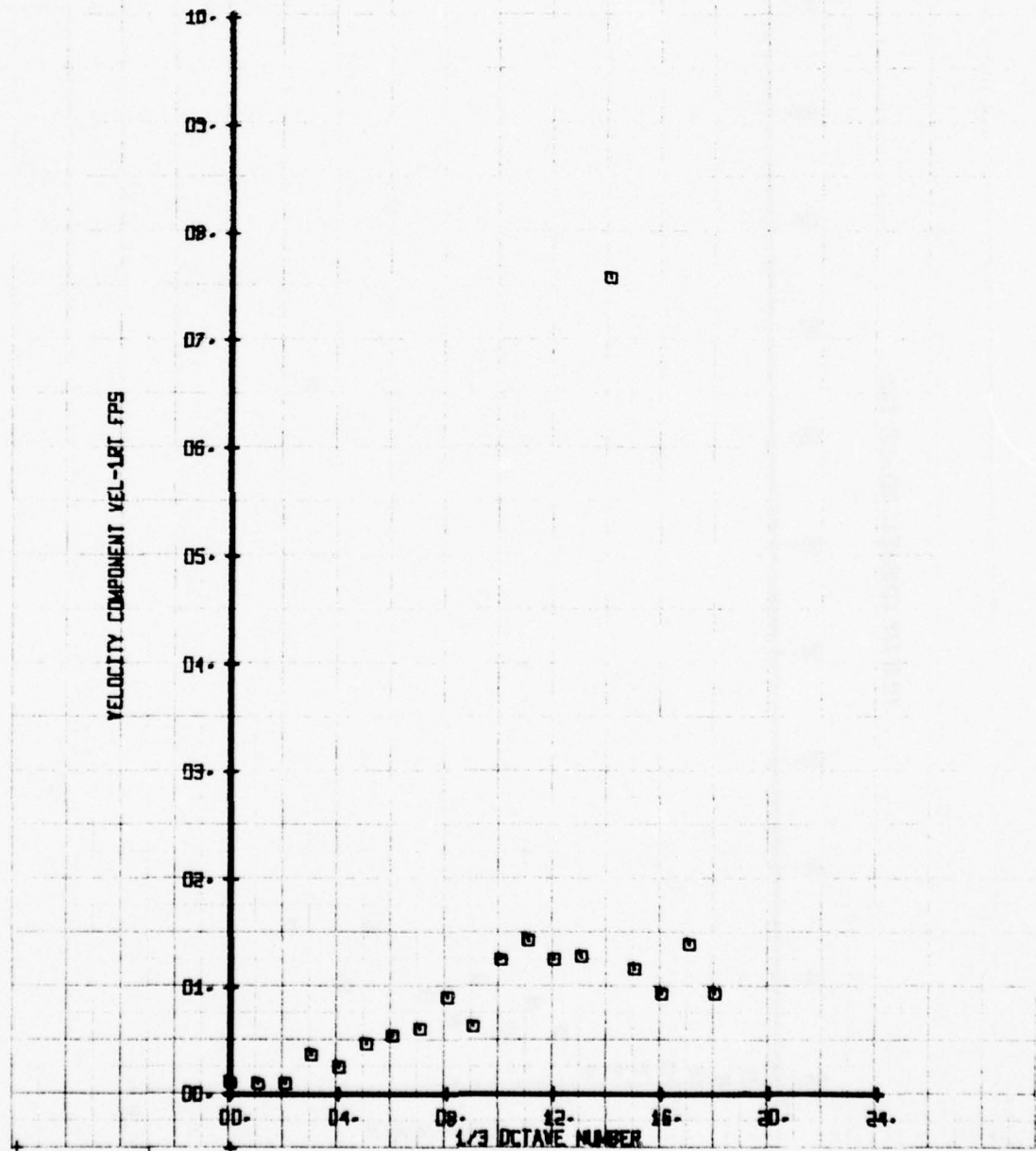
LEGEND
 CH 74
 PARAMETER
 VEL-1RT

VELOCITY COMPONENT VEL-1RT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG- TRAVERSE ABOVE T/R C-L-
RUN 114 TP B

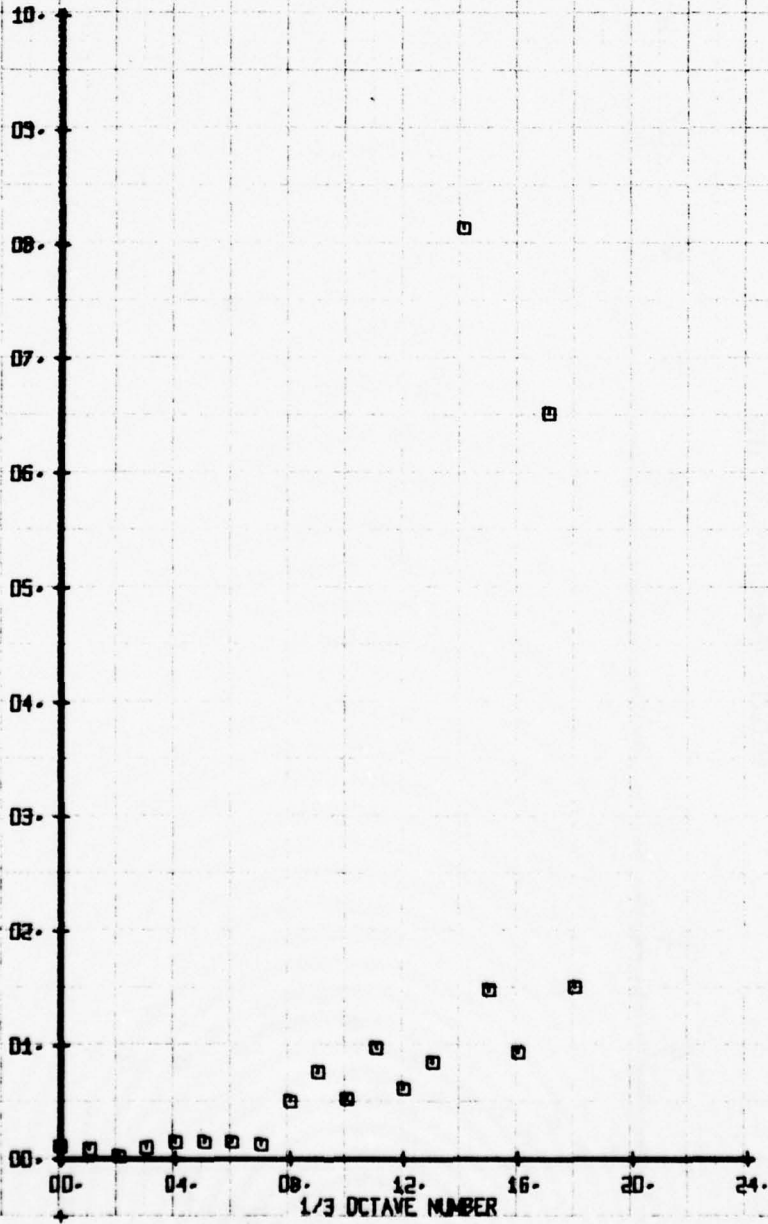
LEGEND
SYM CH PARAMETER
□ 74 VEL-1RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C-L.
 RUN 114 TP 10

SYM CH PARAMETER
 □ 74 VEL-1RT

VELOCITY COMPONENT VEL-1RT FPS



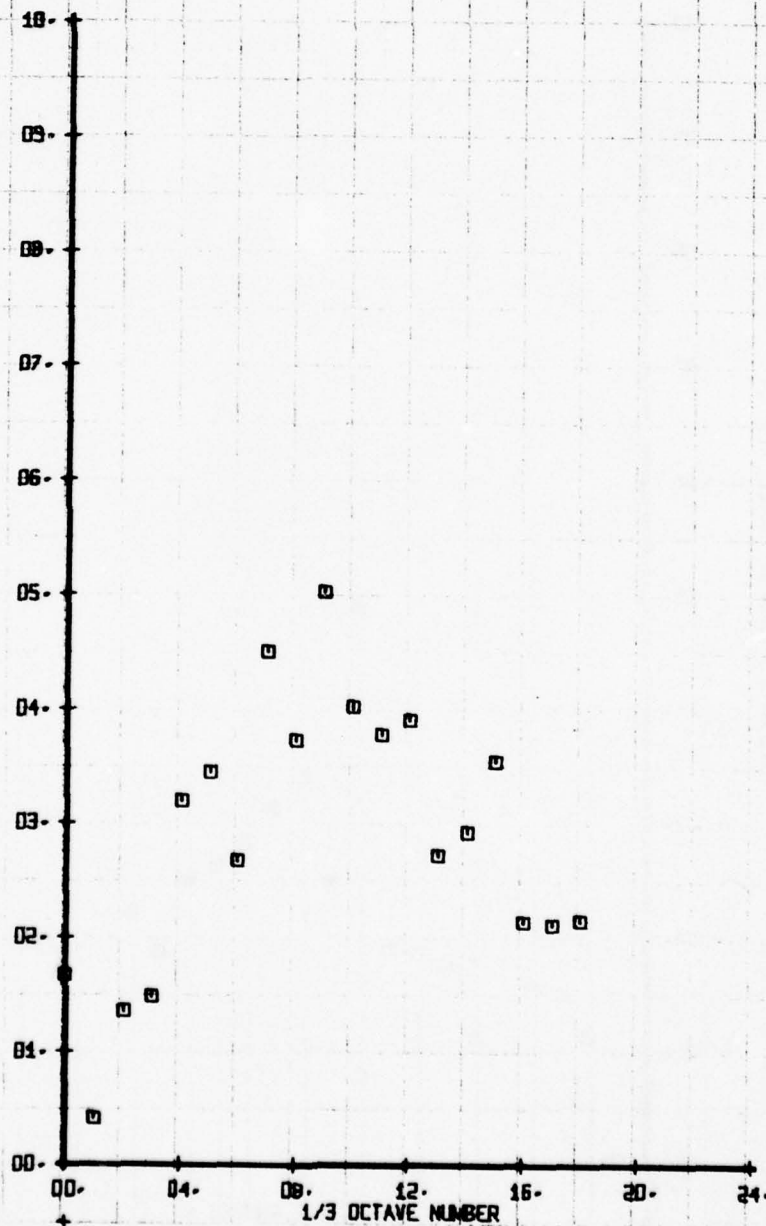
172

SET 4
 BVWT 169

NOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C-L.
 RUN 114 TP 2

SYM CH PARAMETER
 □ 73 VEL-1LT

VELOCITY COMPONENT VEL-1LT FPS



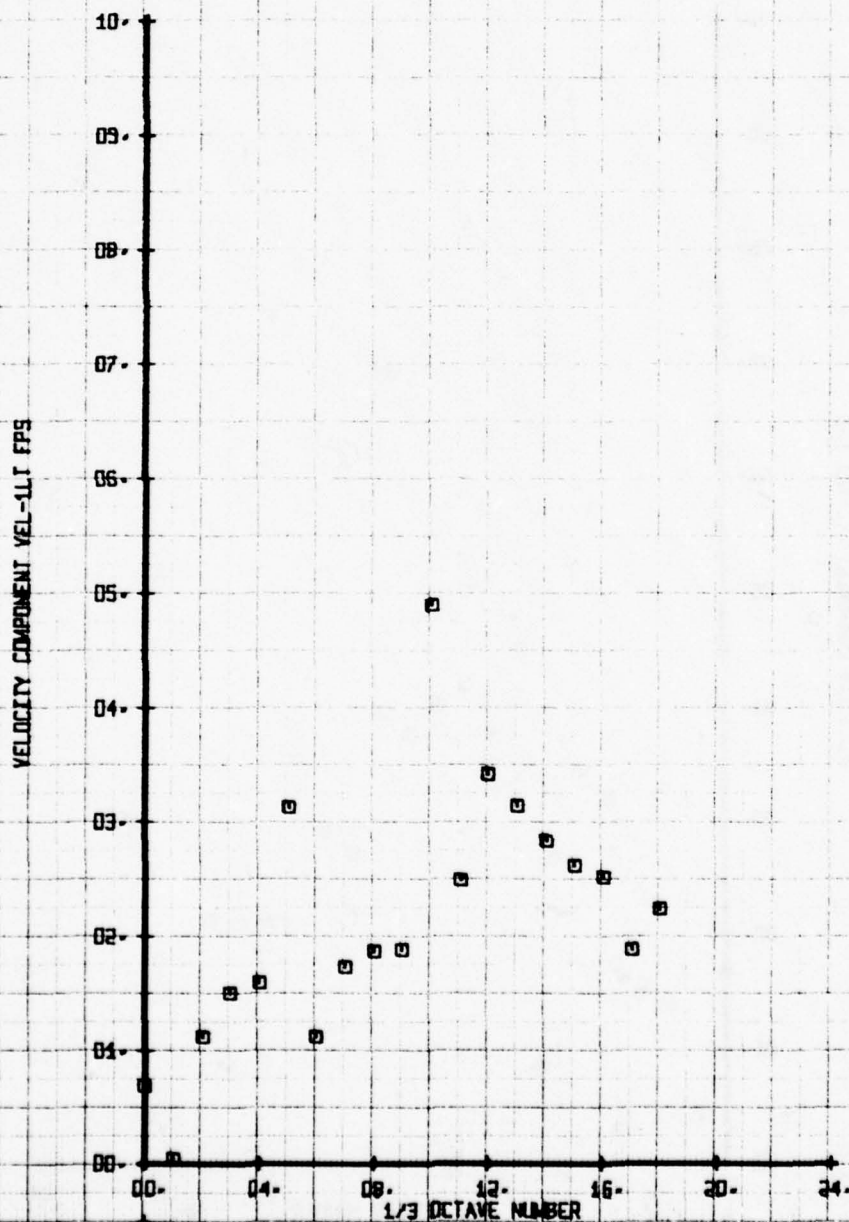
SET 4
 /WT 169

173

SET 4
 8VWT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C-L-
 RUN 114 TP 4

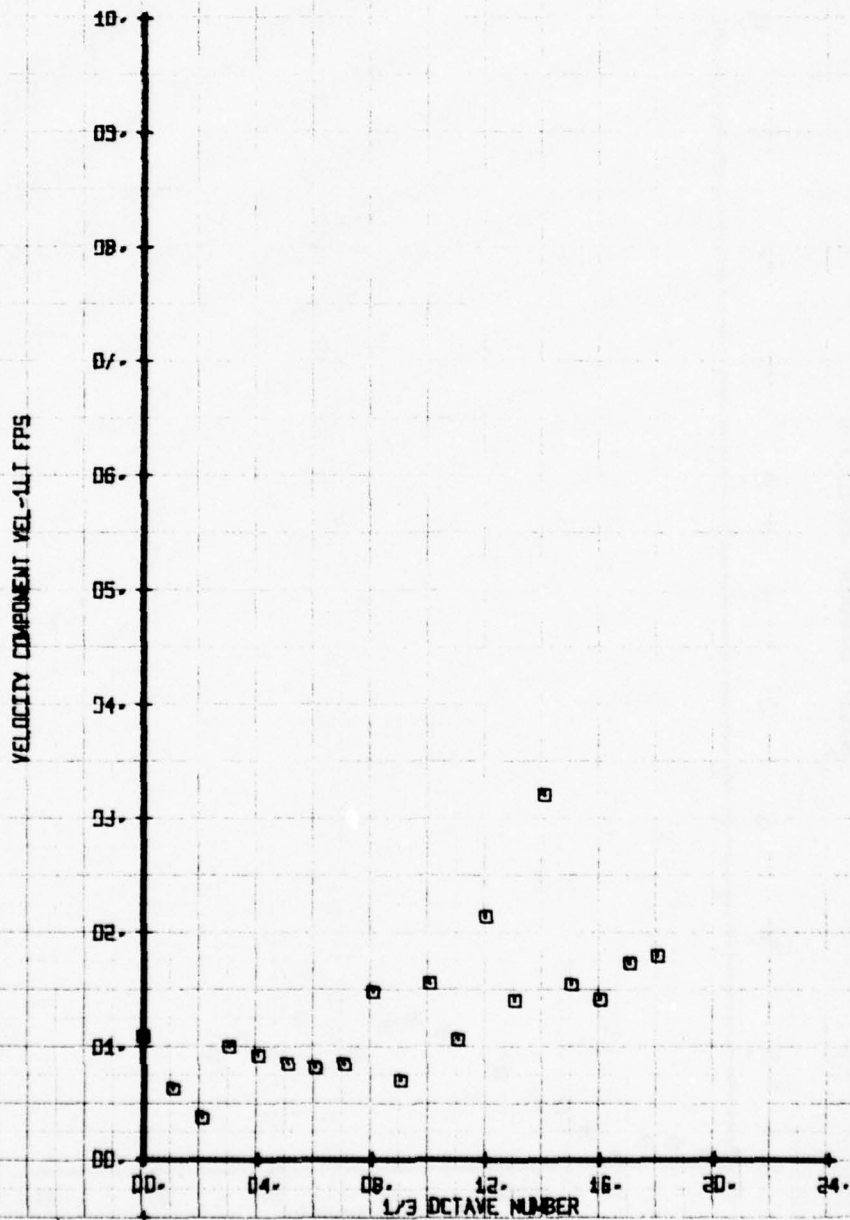
LEGEND
 SYM CH PARAMETER
 □ 73 VEL-1LT



RET 4
 WT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C.L.
 RUN 114 TP 6

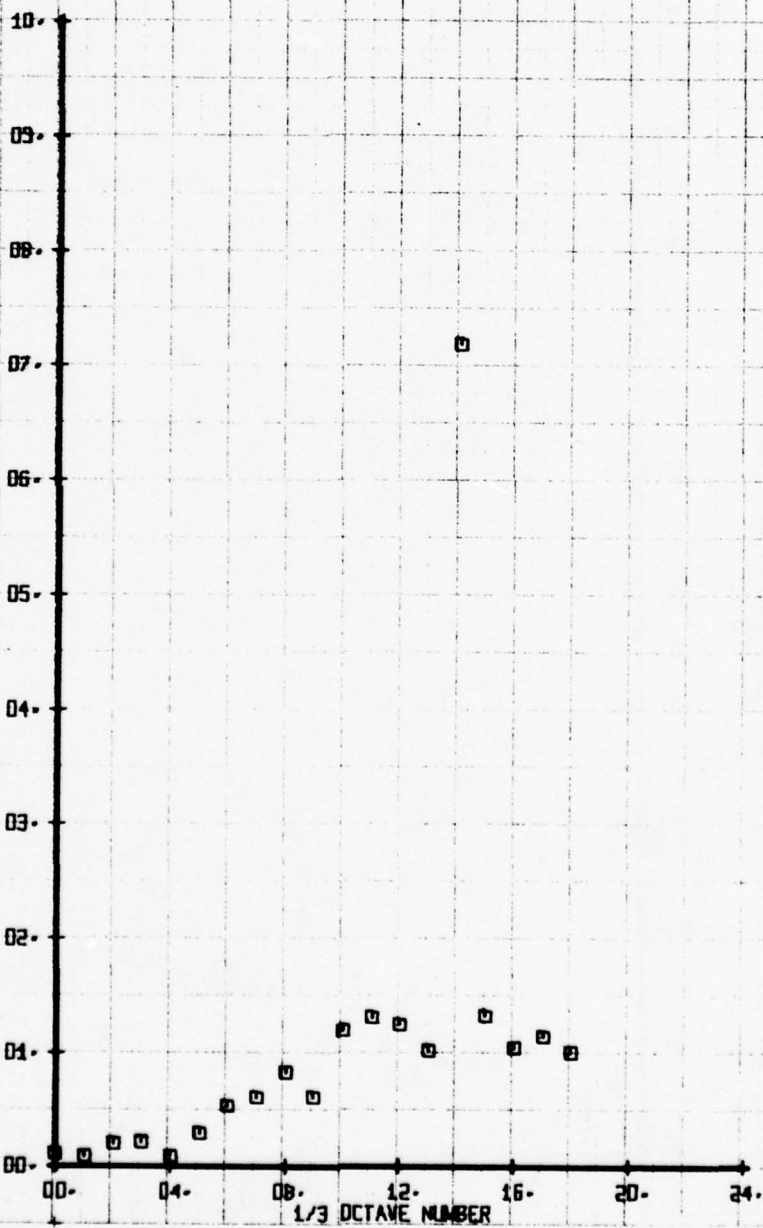
LEGEND
 SYM CH PARAMETER
 □ 73 VEL-1LT



NOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C-L.
 RUN 114 TP 9

SYM	CH	PARAMETER
□	73	VEL-1LT

VELOCITY COMPONENT VEL-1LT FPS



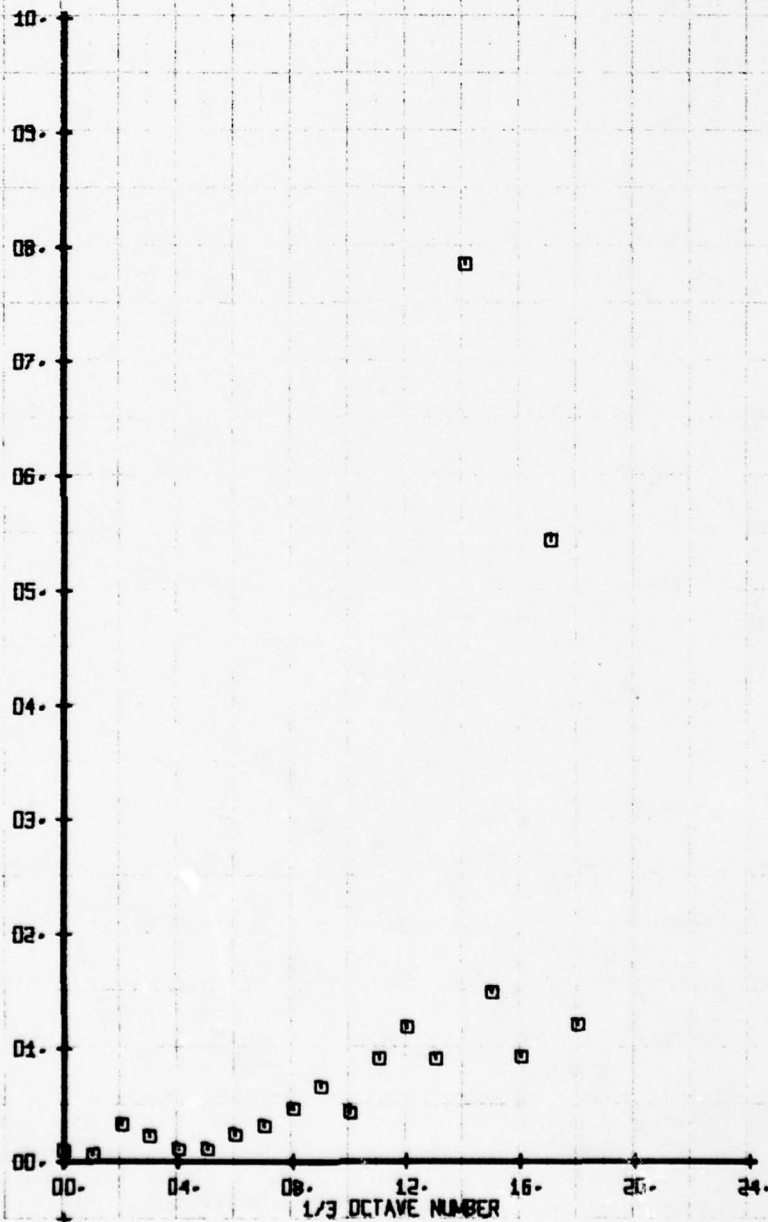
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C-L-
 RUN 114 TP 10

SYM
 □

CH
 73

LEGEND
 PARAMETER
 VEL-1LT

VELOCITY COMPONENT VEL-1LT FPS

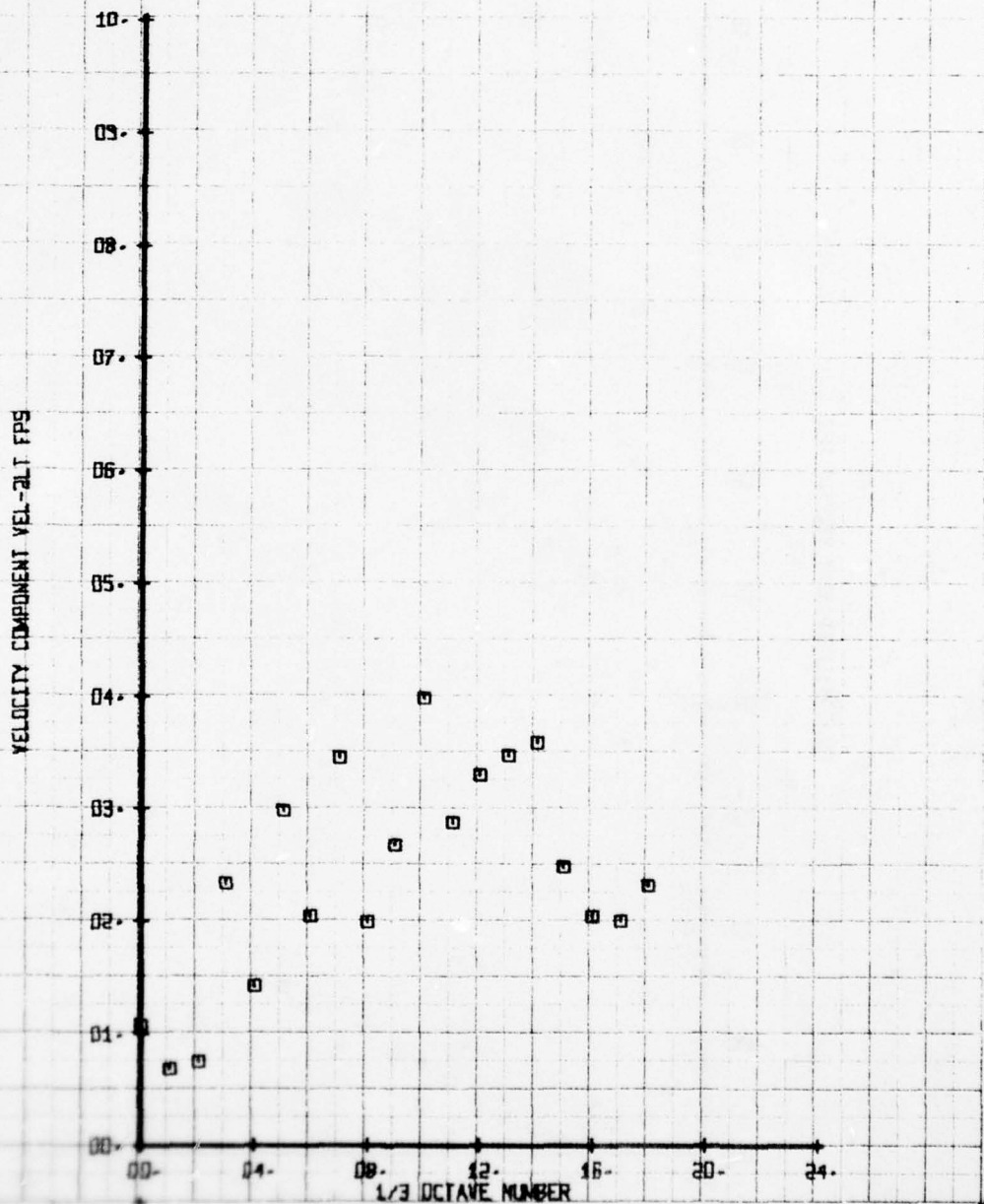


177

SET 4
 BWVT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE ABOVE T/R C-L-
RUN 114 TP 2

LEGEND
SYM CH PARAMETER
□ 72 VEL-ZLT

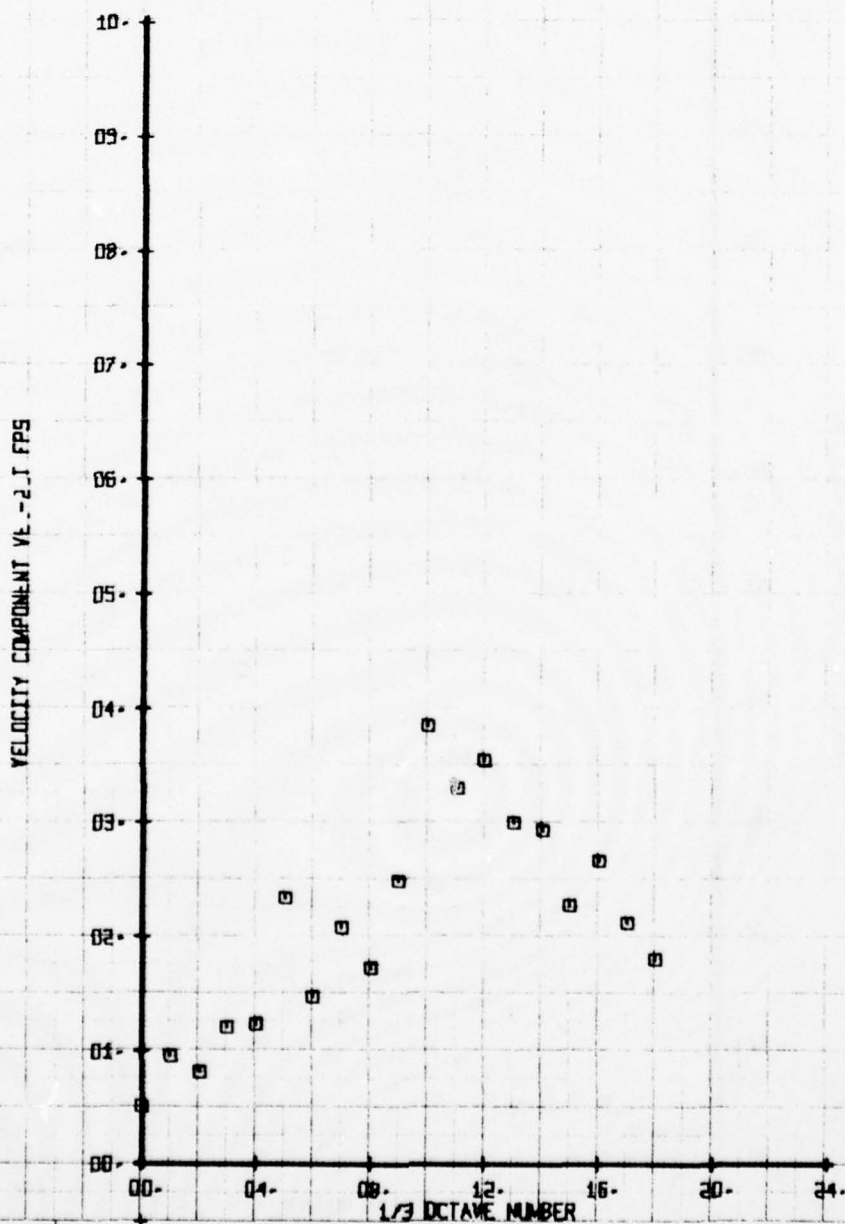


178

SET 4
BVWT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C-L-
 RUN 114 TP 4

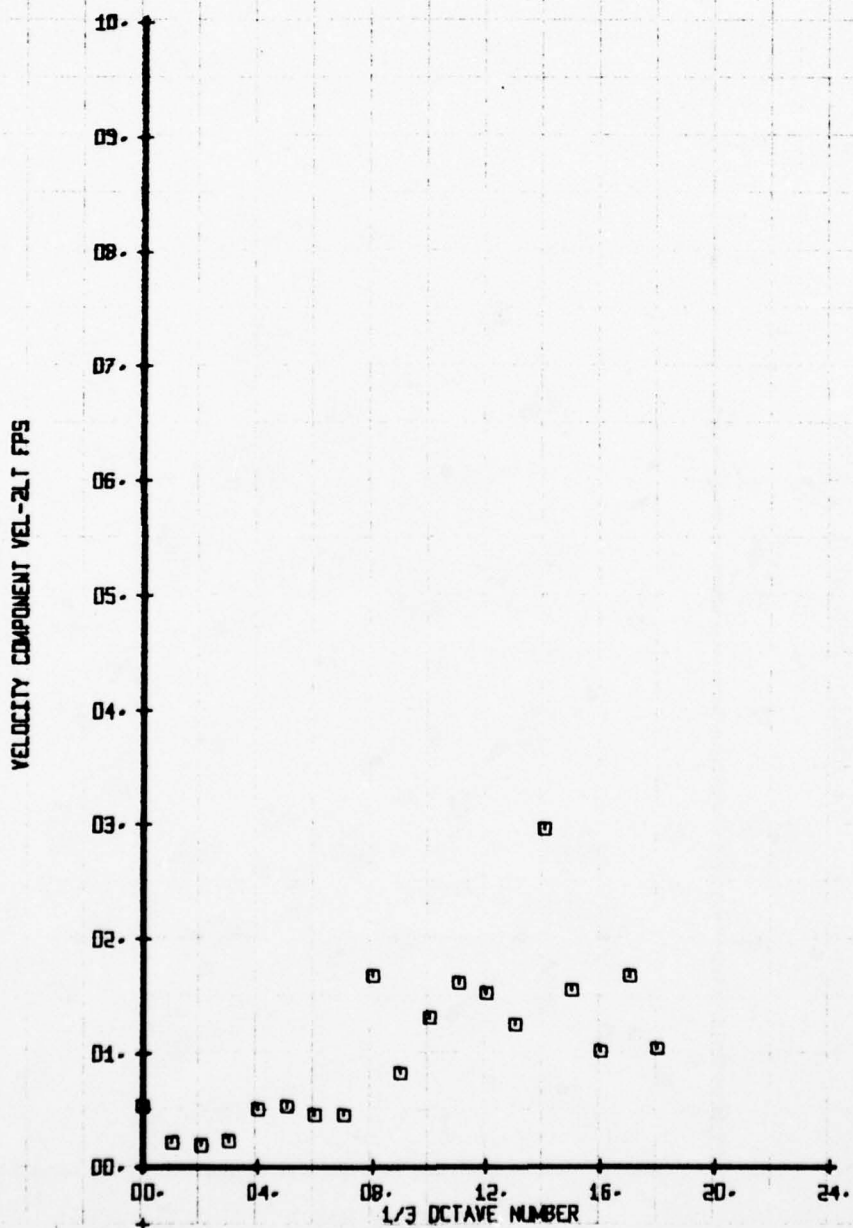
LEGEND
 SYM CH PARAMETER
 □ 72 VEL-2LT



RET
 WT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG- TRAVERSE ABOVE T/R C-L-
 RUN 114 TP 6

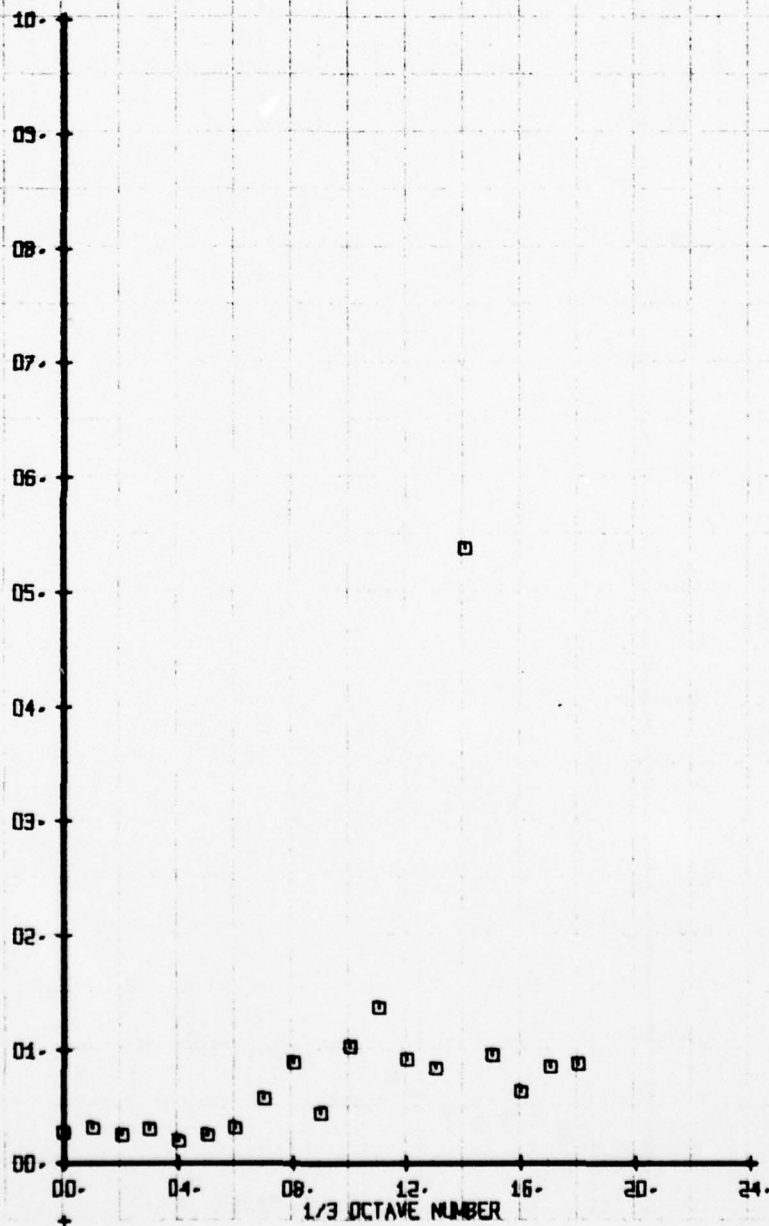
LEGEND
 CH 72 PARAMETER
 VEL-2LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG- TRAVERSE ABOVE T/R C-L-
 RUN 114 TP B

LEGEND
 SYM CH PARAMETER
 □ 72 VEL-2LT

VELOCITY COMPONENT VEL-2LT FPS

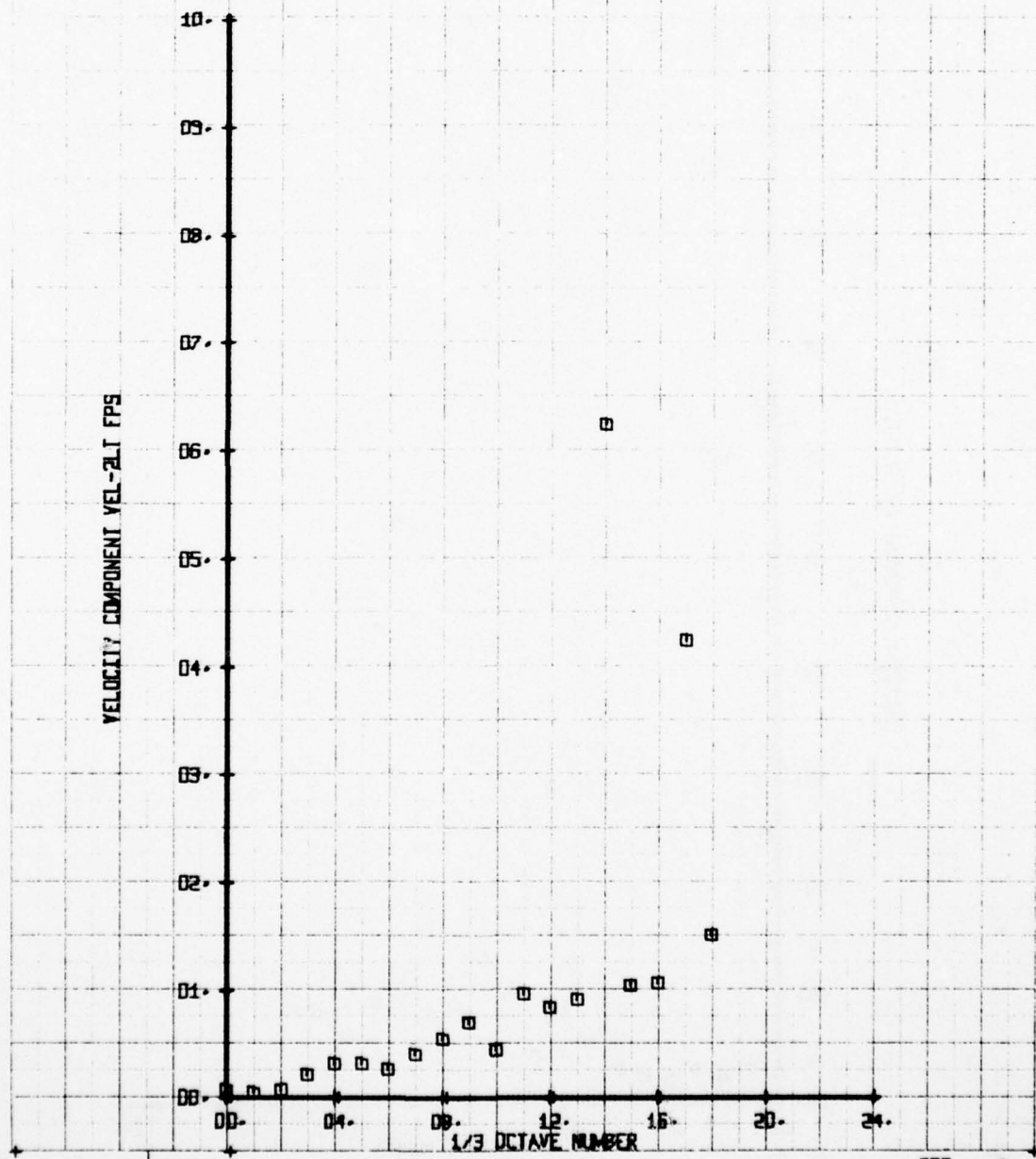


HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C-L-
 RUN 114 TP 10

GYM
 0

CH
 72

LEGEND
 PARAMETER
 VEL-2LT

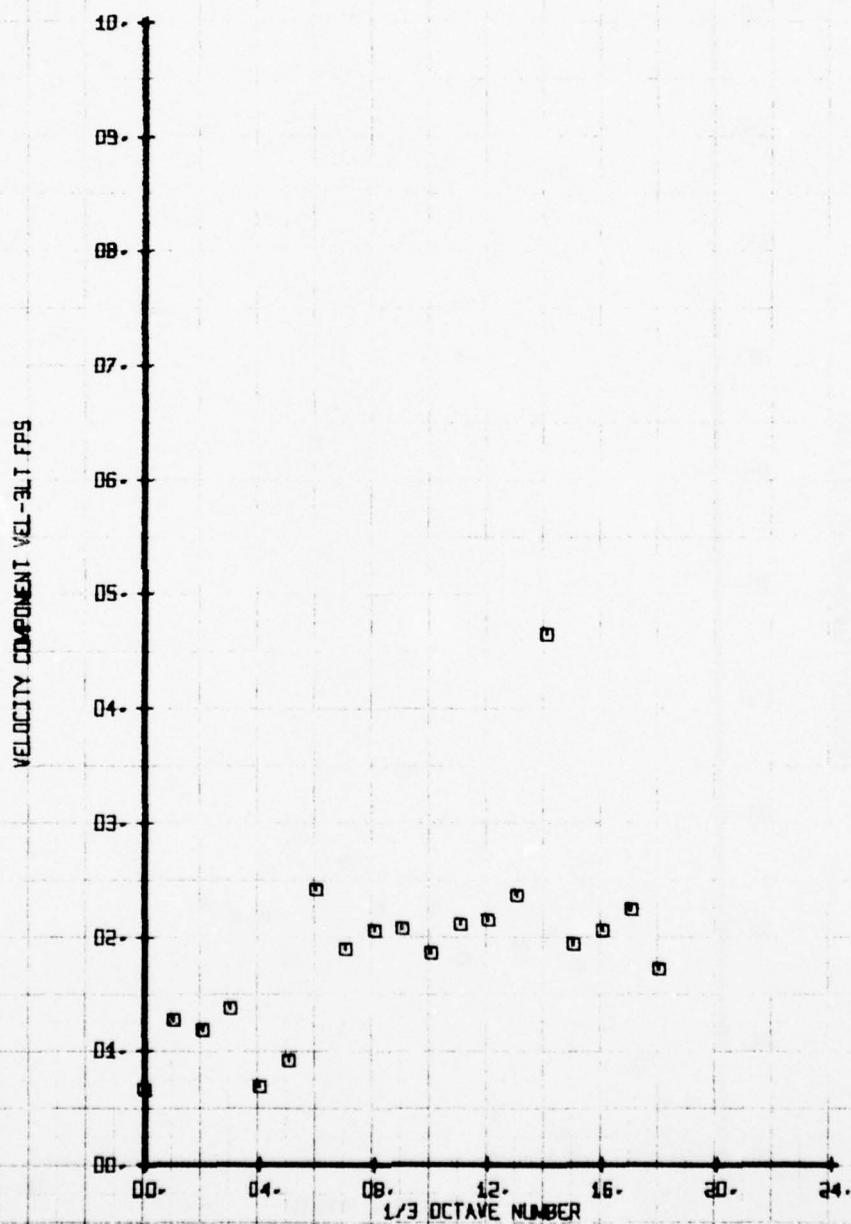


182

SET 4
 BVWT 169

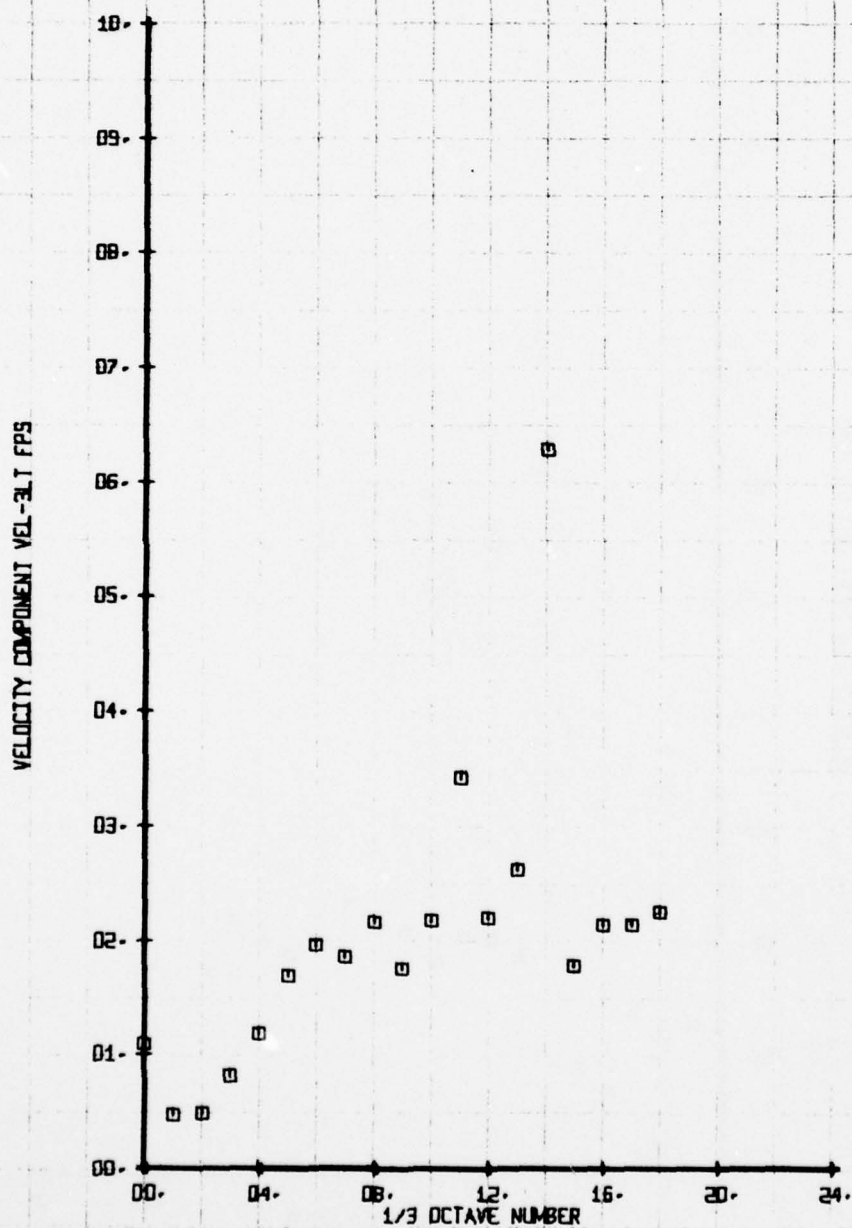
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C-L-
 RUN 114 TP 2

LEGEND
 SYM CH PARAMETER
 □ 70 VEL-3LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C.L.
 RUN 114 TP 4

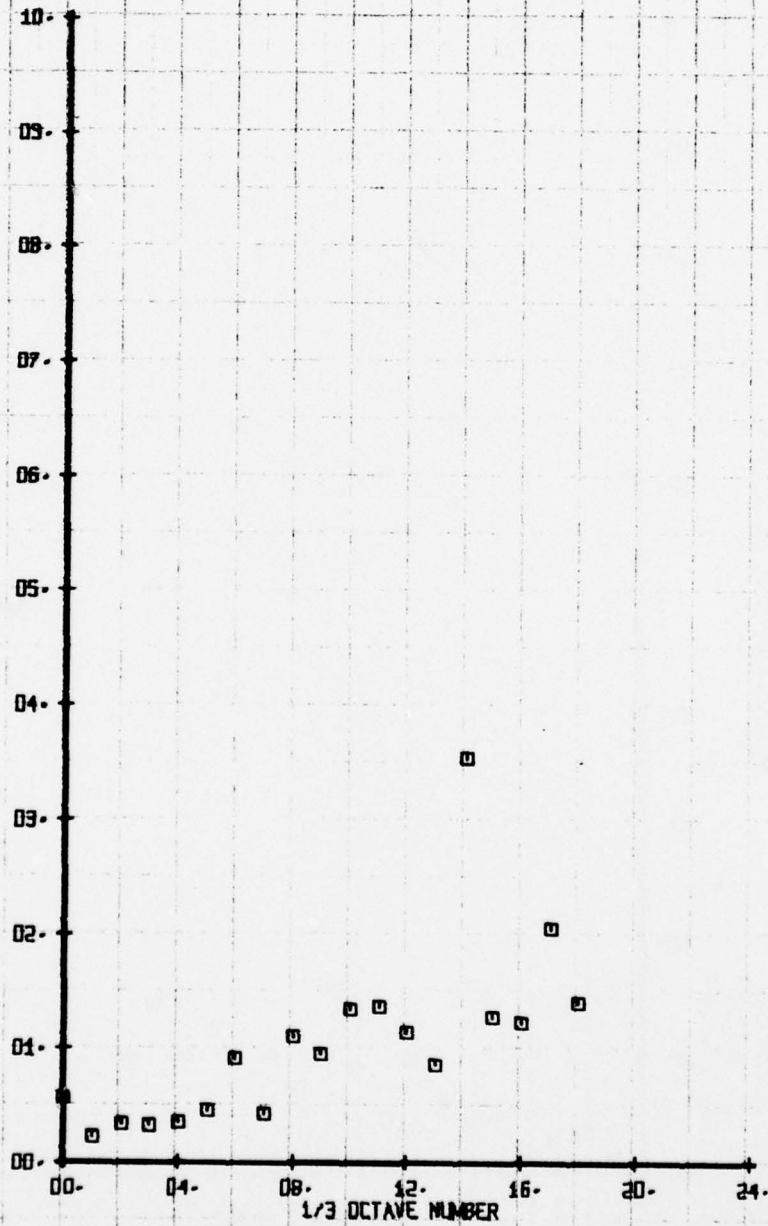
SYM	CH	PARAMETER
□	70	VEL-3LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C-L-
 RUN 114 TP 6

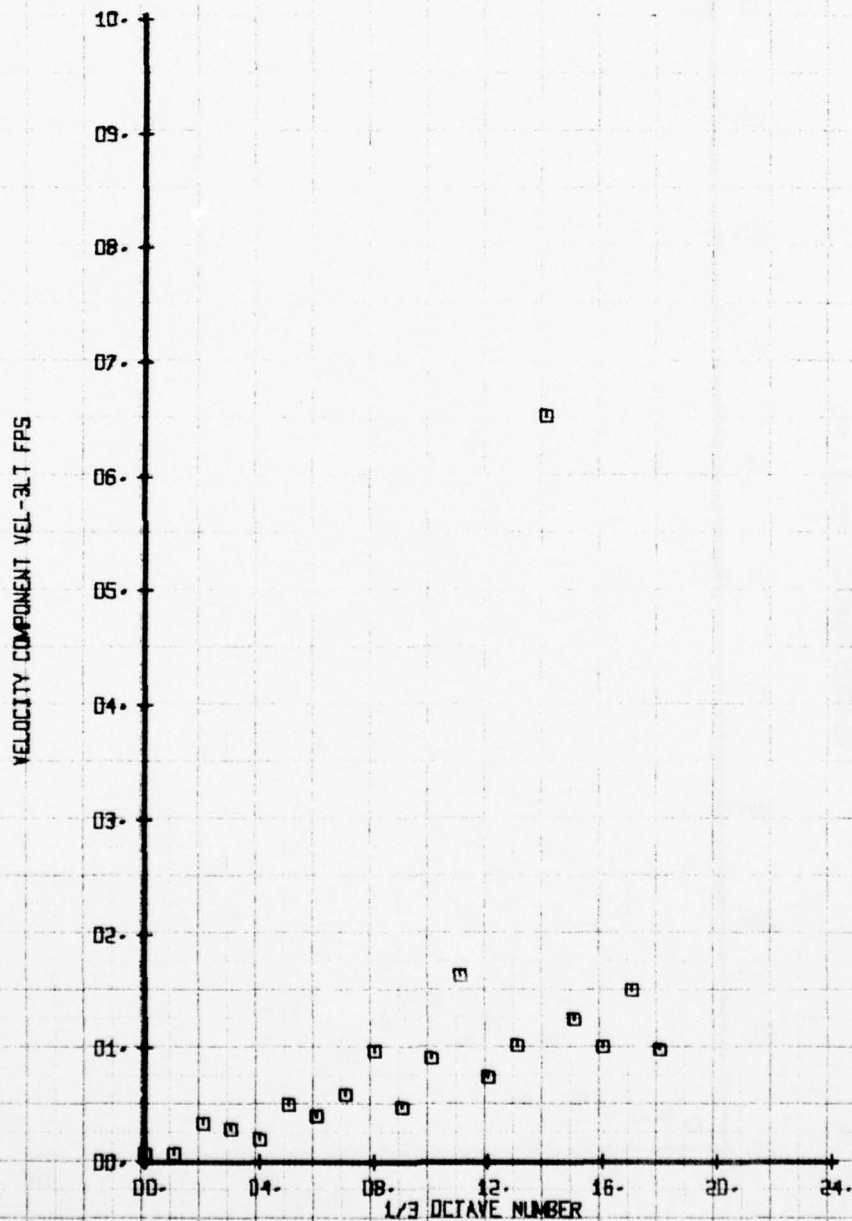
SYM CH PARAMETER
 □ 70 VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS



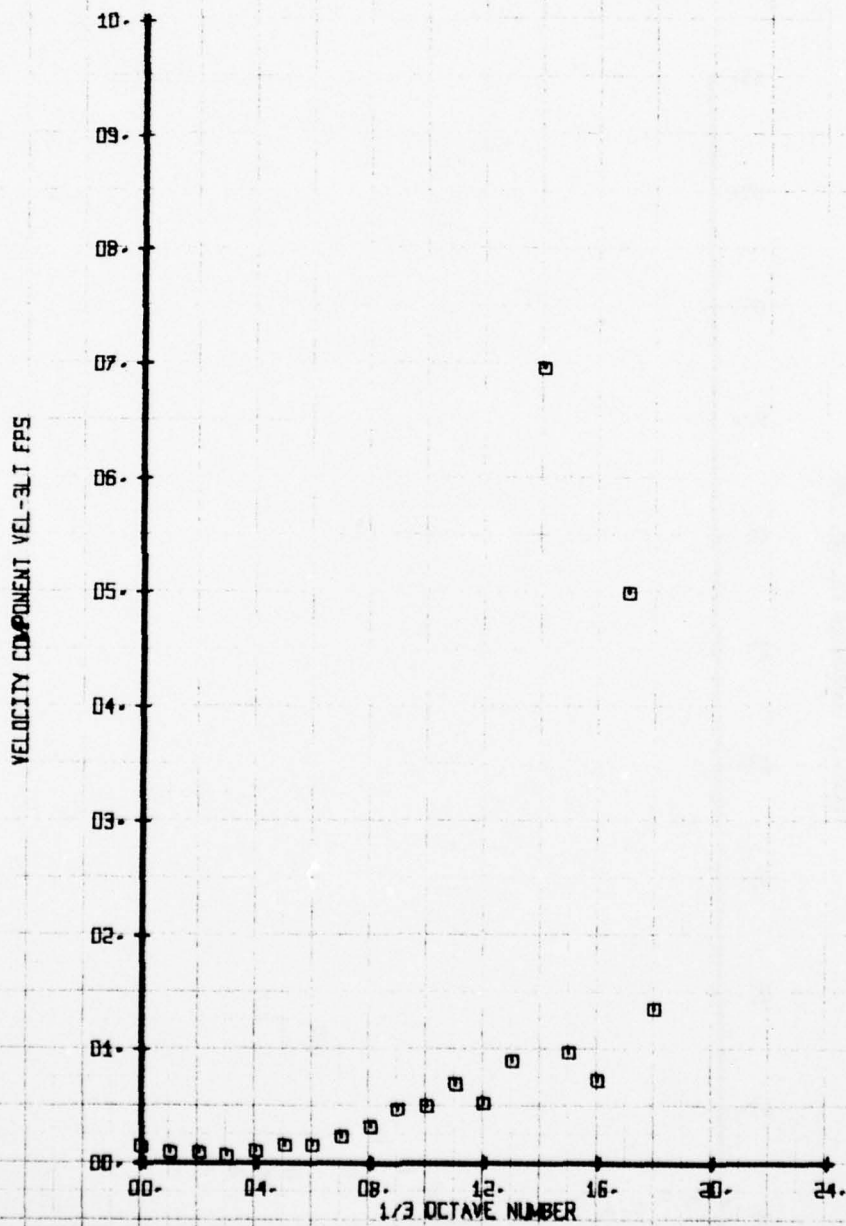
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C-L-
 RUN 114 TP 8

LEGEND
 SYM CN PARAMETER
 □ 70 VEL-3LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE ABOVE T/R C-L.
 RUN 114 TP 10

LEGEND
 SYM CH PARAMETER
 □ 70 VEL-3LT



187

SET 4
 BVWT 169

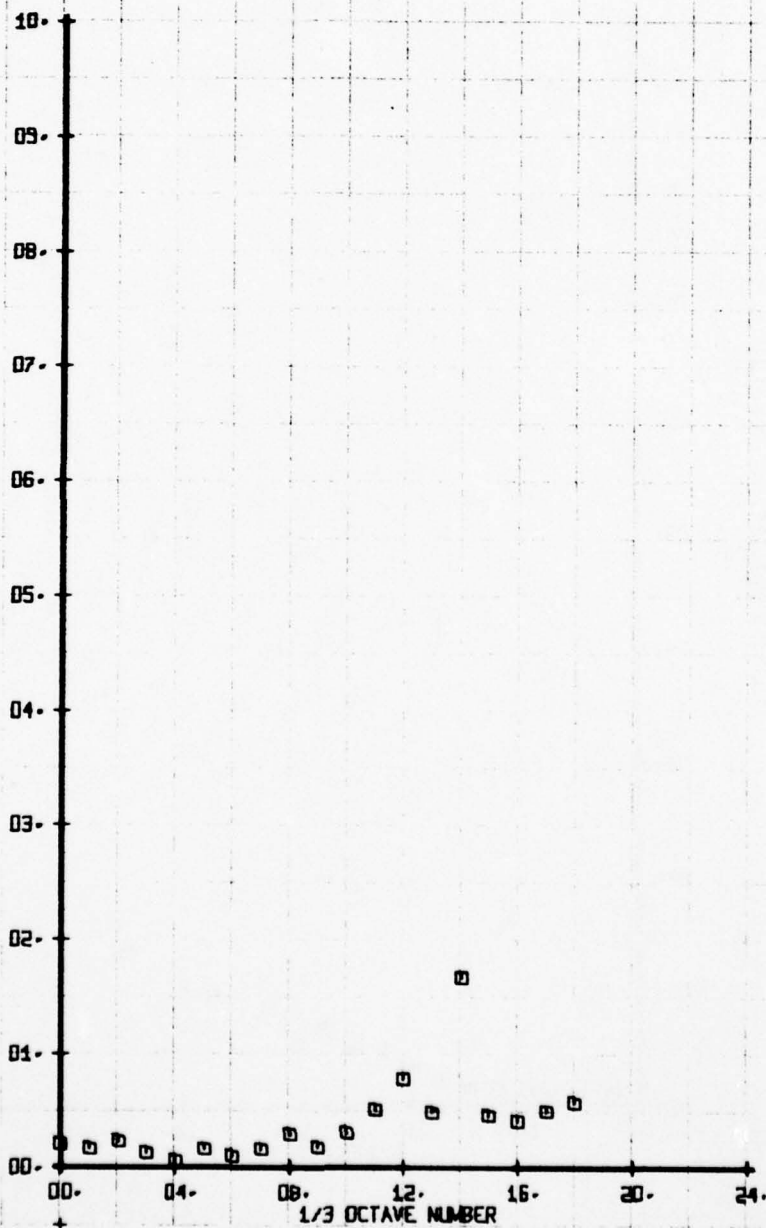
HOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE BEHIND STAB.
 RUN 145 TP 3

SYM
 □

CH
 71

LEGEND
 PARAMETER
 VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS



SET 5
 WT 169

SET 5
 BVWT 169

188

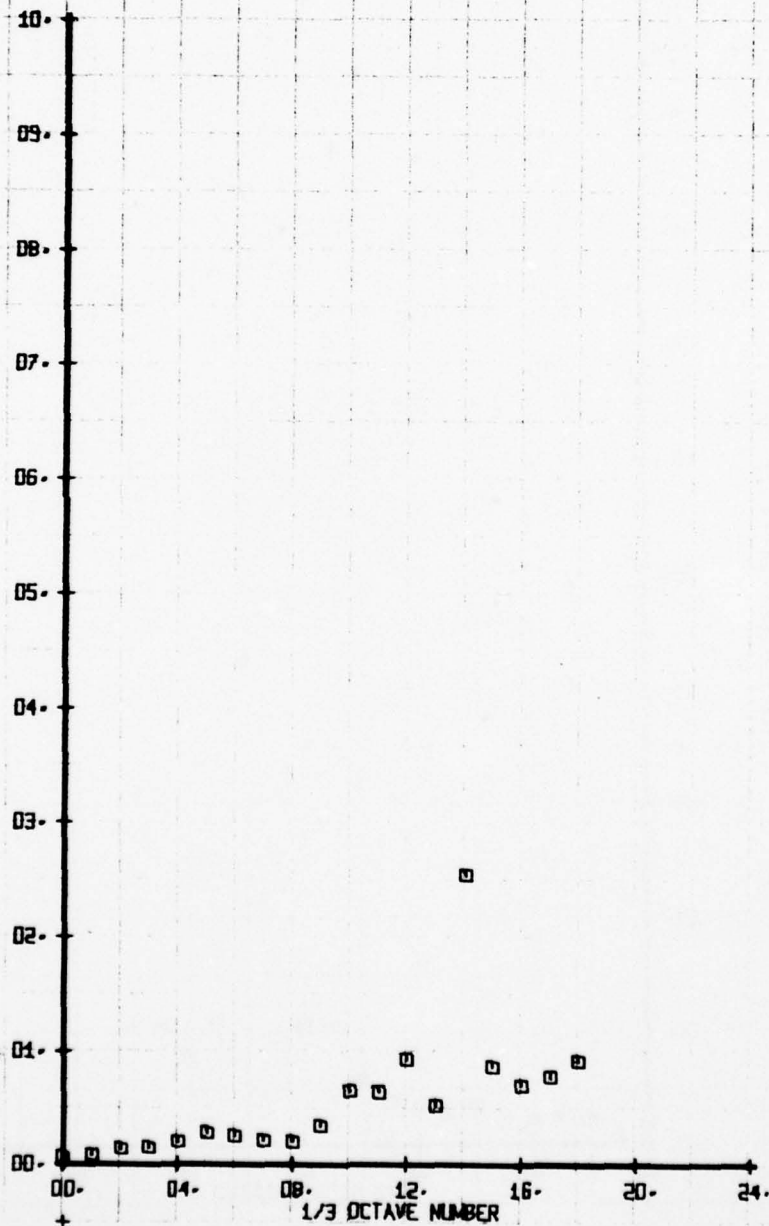
NOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG TRAVERSE BEHIND STAB.
 RUN 115 TP 4

SYM
 □

CH
 71

LEGEND
 PARAMETER
 VEL-3RT

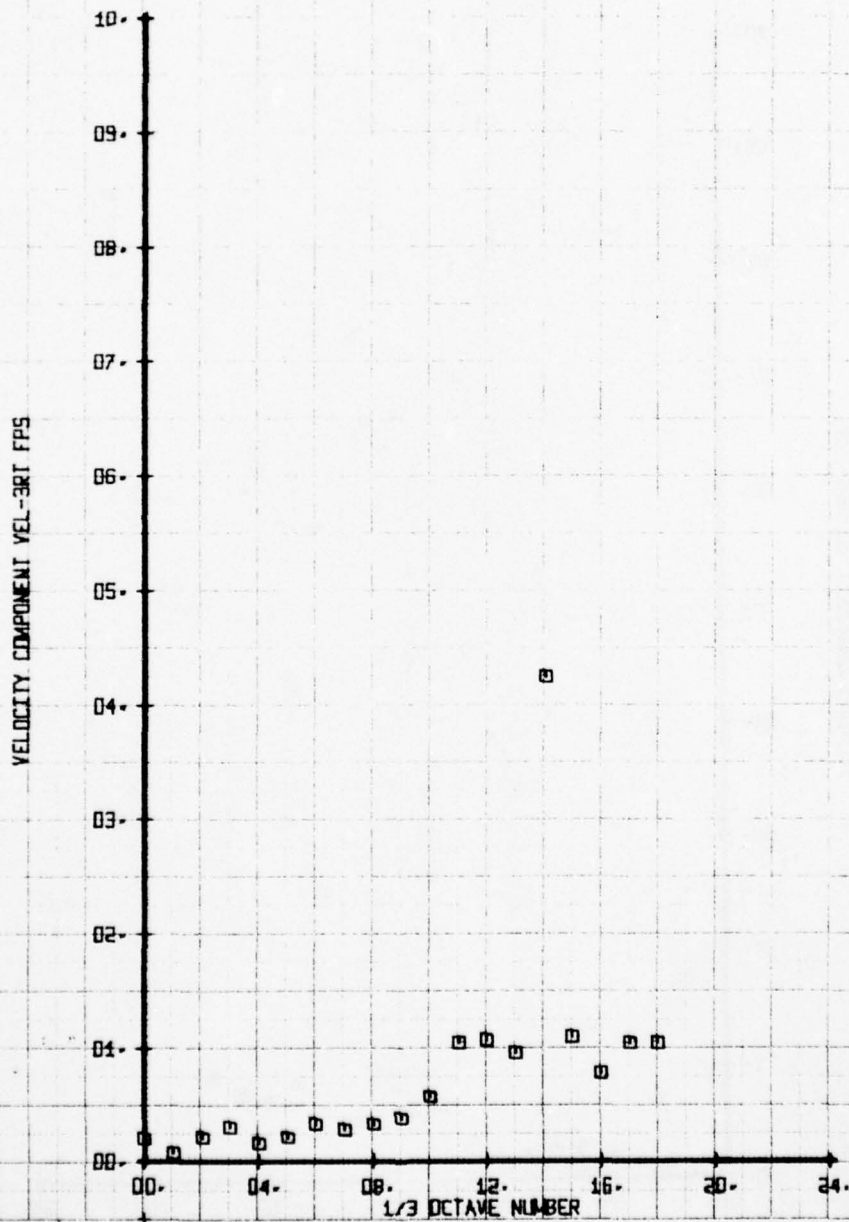
VELOCITY COMPONENT VEL-3RT FPS



IET 5
 WT 169

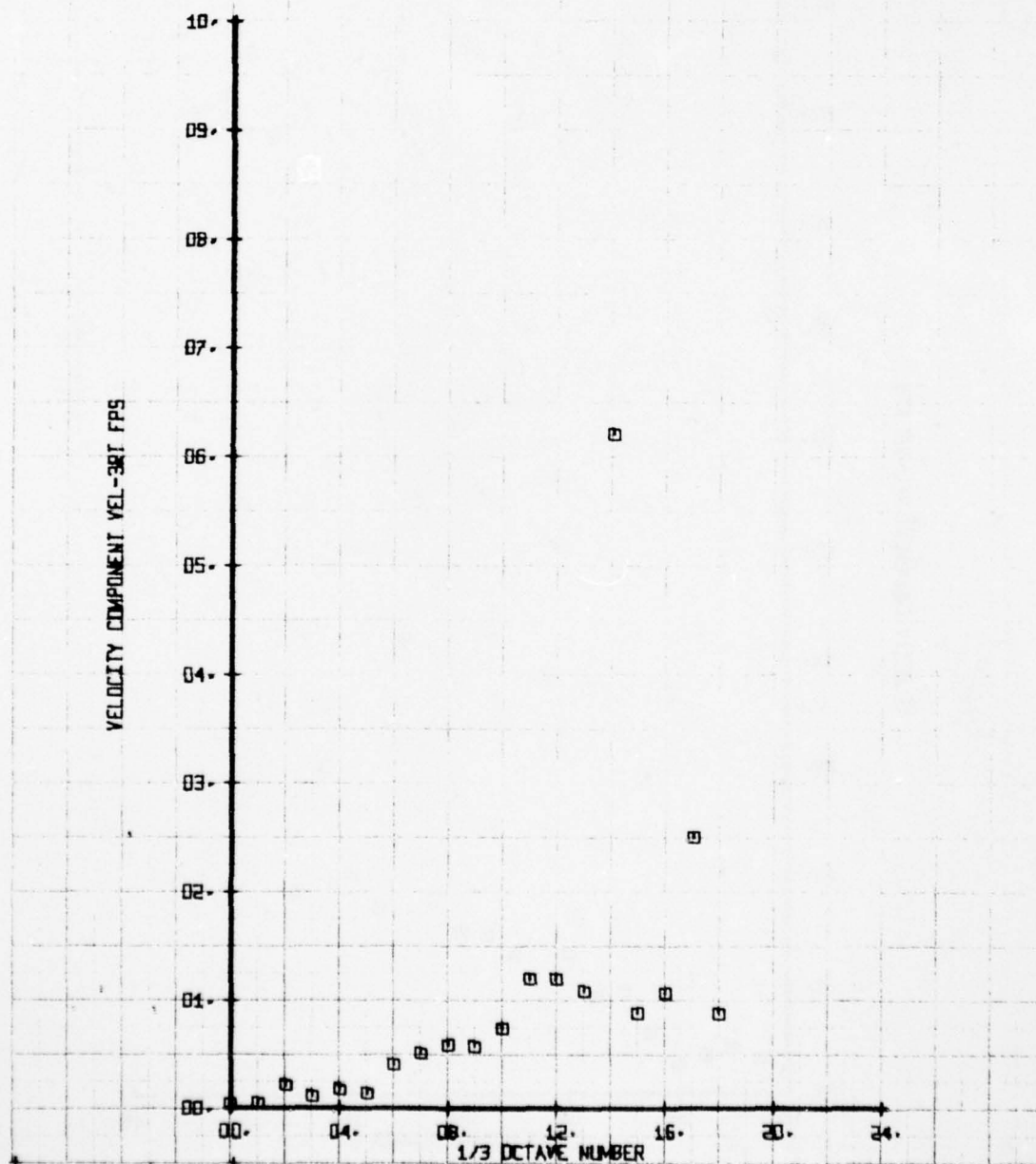
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE BEHIND STAB.
 RUN 115 TP 6

SYM	CH	PARAMETER
□	71	VEL-3RT



NOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE BEHIND STAB.
RUN 115 TP 9

LEGEND
SYM CH PARAMETER
□ 71 VEL-3RT



AD-A061 861

BOEING VERTOL CO PHILADELPHIA PA

F/G 1/3

INTERACTIONAL AERODYNAMICS OF THE SINGLE ROTOR HELICOPTER CONF--ETC(U)

SEP 78 P F SHERIDAN

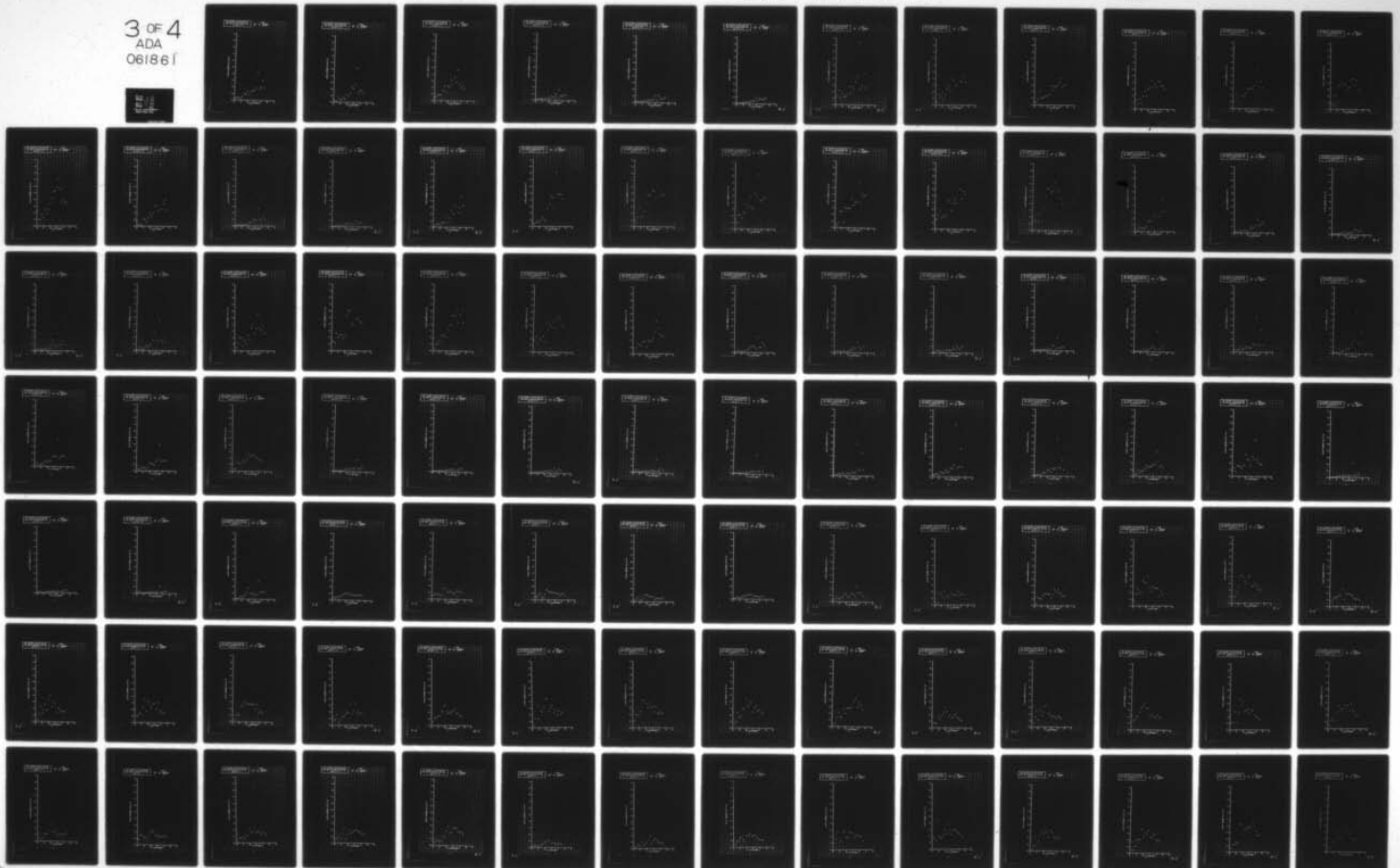
DAAJ02-77-C-0020

UNCLASSIFIED

USARTL-TR-78-23F

NL

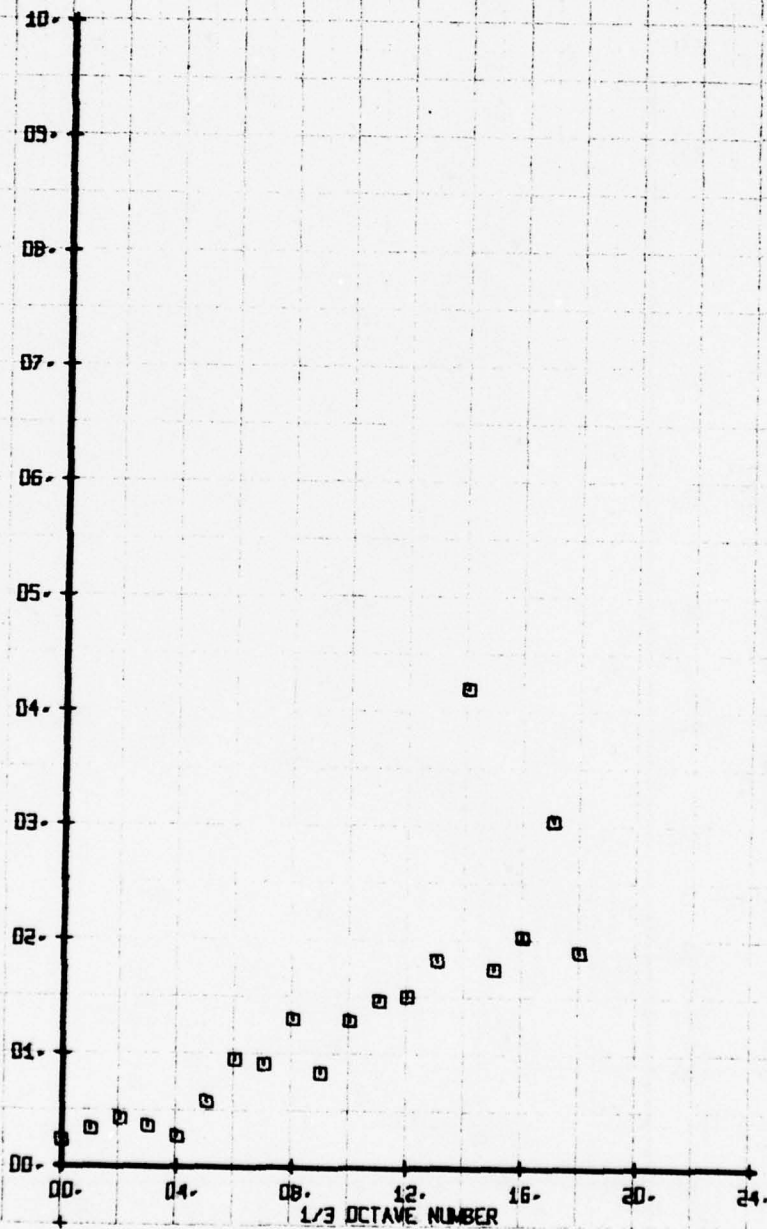
3 OF 4
ADA
061861



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE BEHIND STAB.
 RUN 115 TP 10

SYN CH PARAMETER
 0 71 VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS



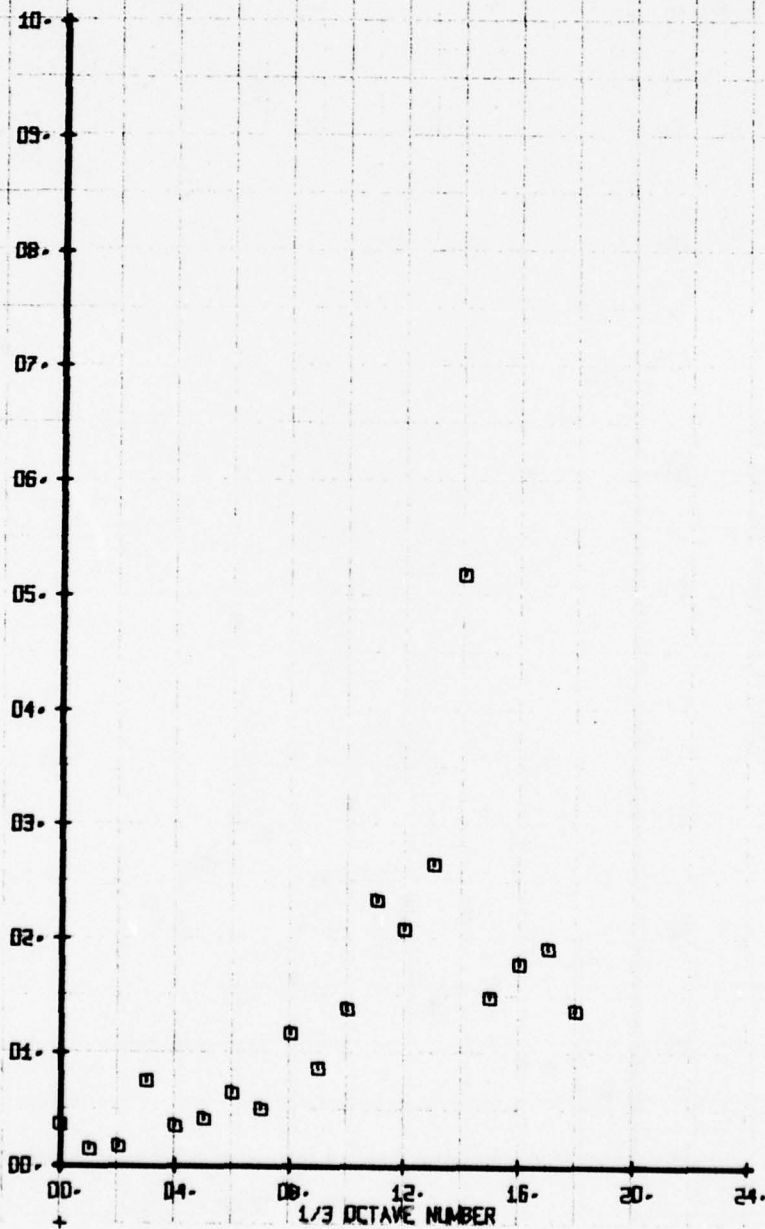
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE BEHIND STAB.
 RUN 145 TP 12

SYM
 □

CH
 71

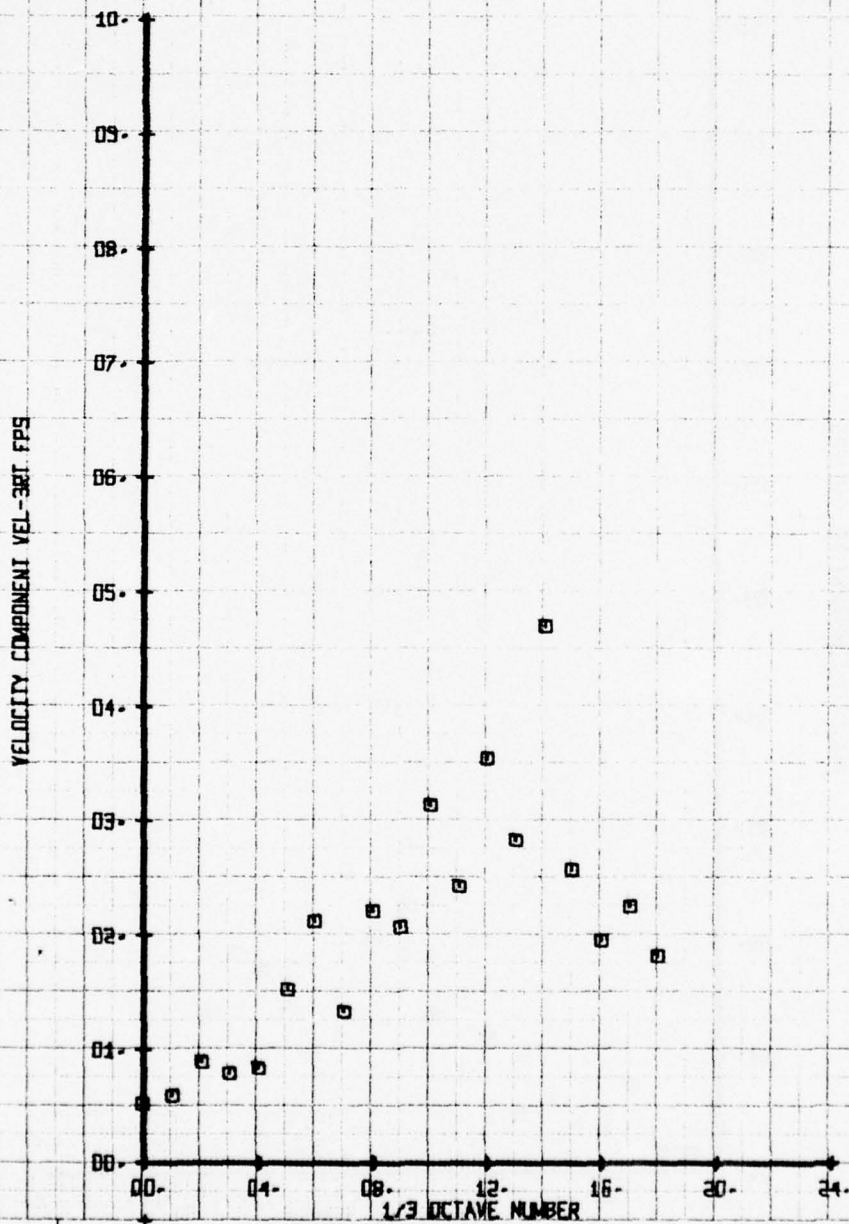
LEGEND
 PARAMETER
 VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS



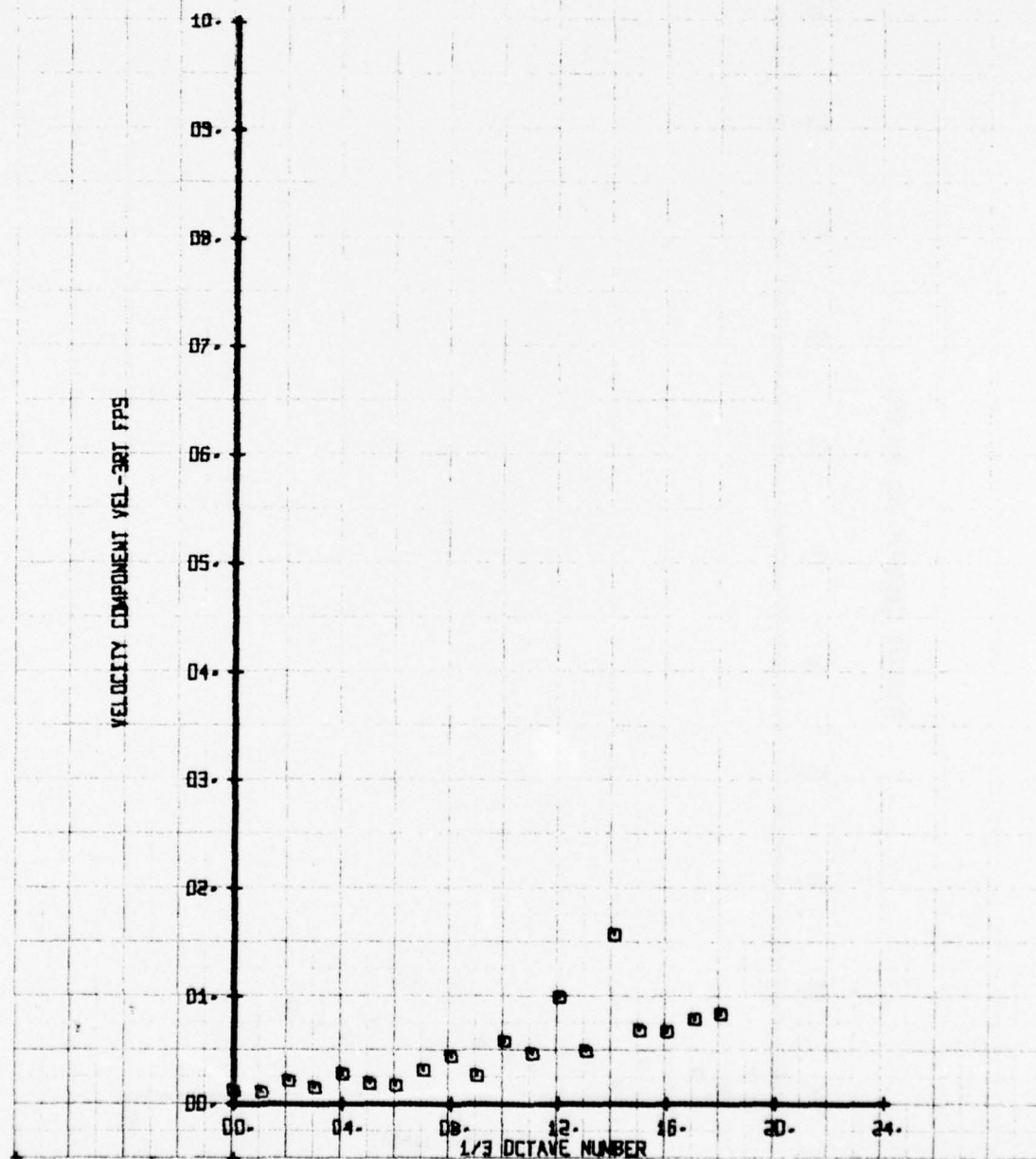
NOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG: TRAVERSE BEHIND STAB-
 RUN 115 TP 14

LEGEND
 SYM CH PARAMETER
 □ 71 VEL-3RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG: TRAVERSE BEHIND STAB.
RUN 115 TP 15

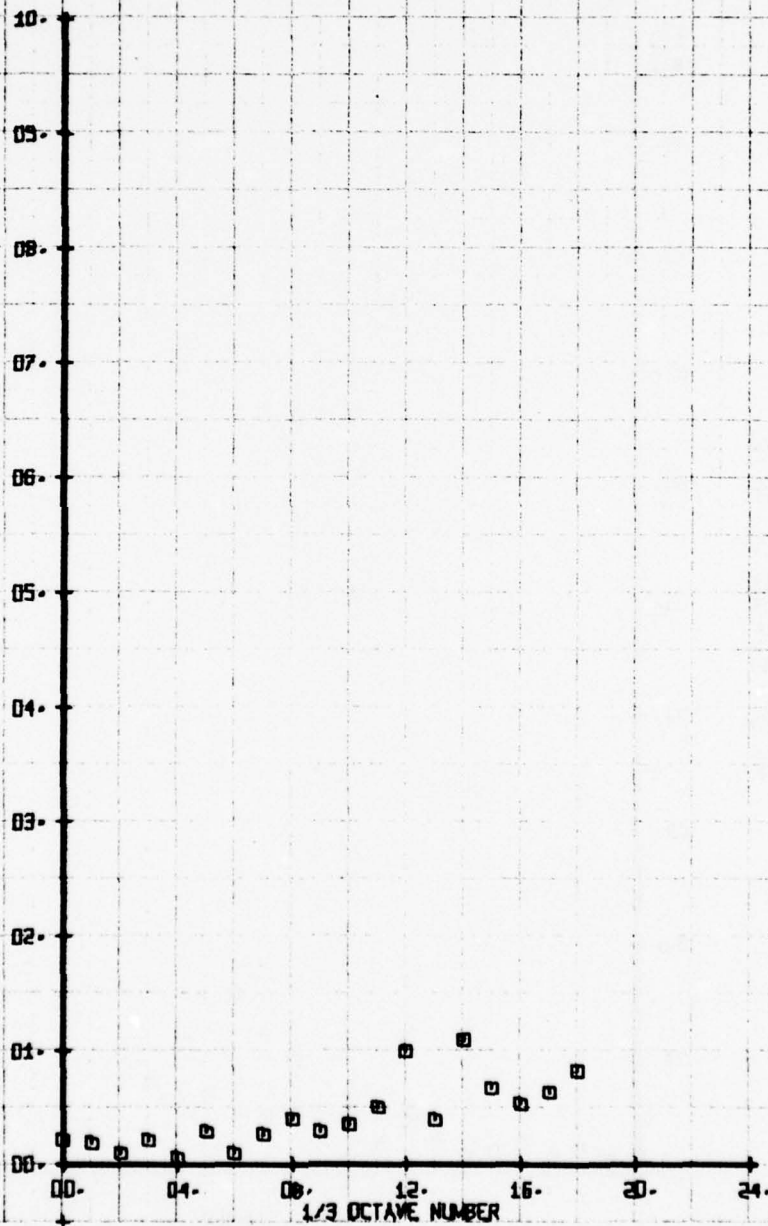
SYM	CH	LEGEND
□	71	PARAMETER VEL-3RT



NOT FILM RATE 1/3 OCTAVE ANALYSIS
 BASE CONFIG- TRAVERSE BEHIND STAB-
 RUN 115 TP 1B

LEGEND
 GYM CM PARAMETER
 01 71 VEL-3RT

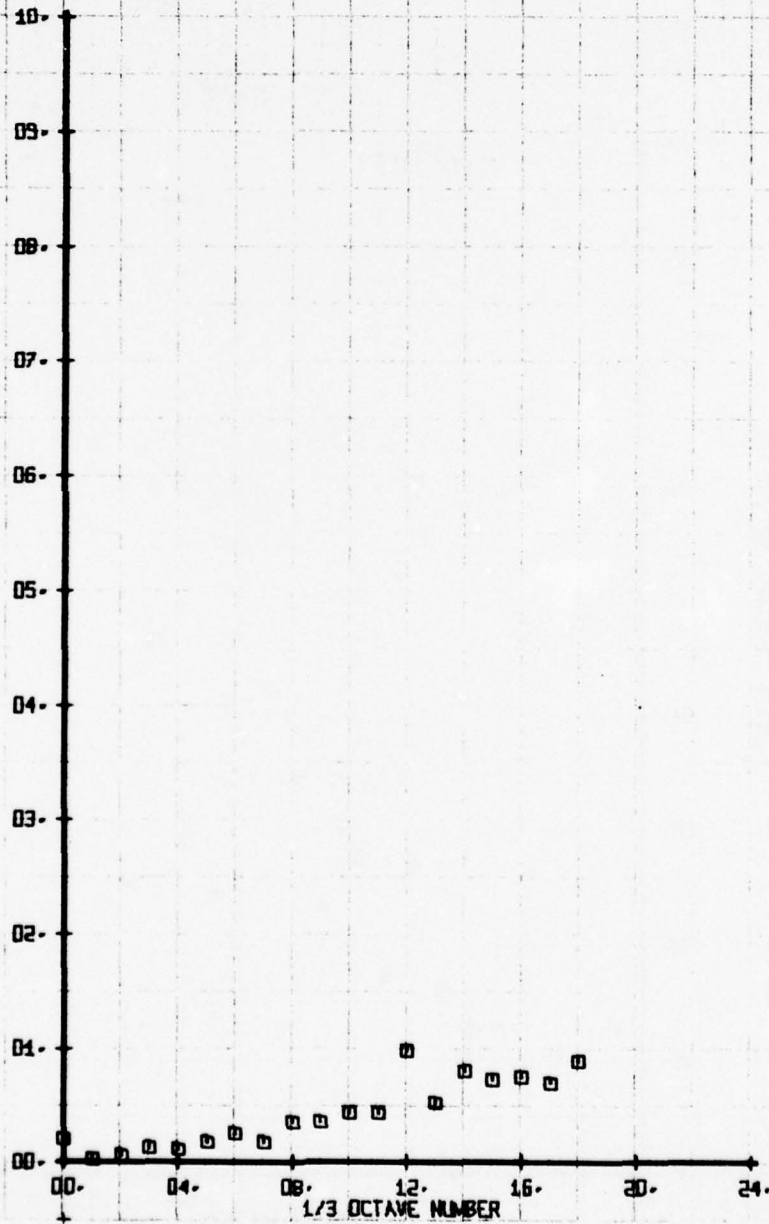
VELOCITY COMPONENT VEL-3RT FPS



NOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE BEHIND STAB.
 RUN 145 TP 20

SYM	CH	PARAMETER
□	71	VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS



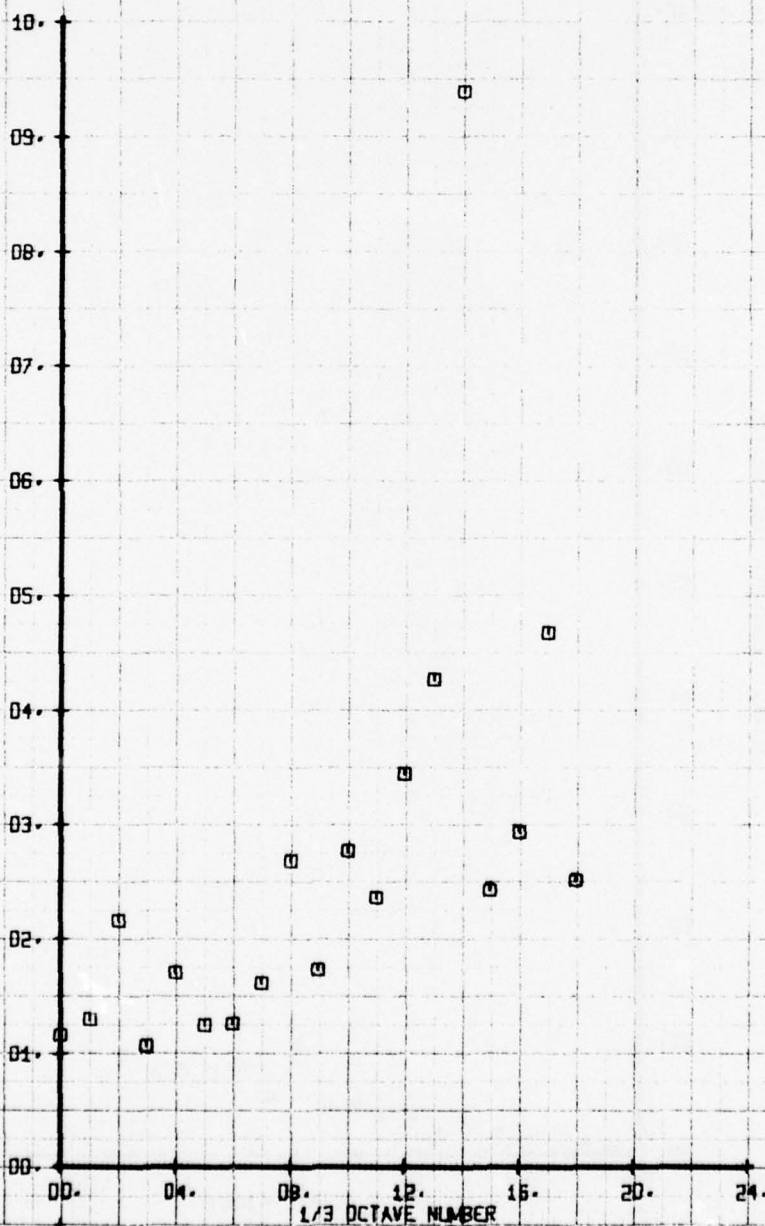
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE BEHIND STAB.
 RUN 115 TP 3

SYM
 □

CH
 75

LEGEND
 PARAMETER
 VEL-2RT

VELOCITY COMPONENT VEL-2RT FPS



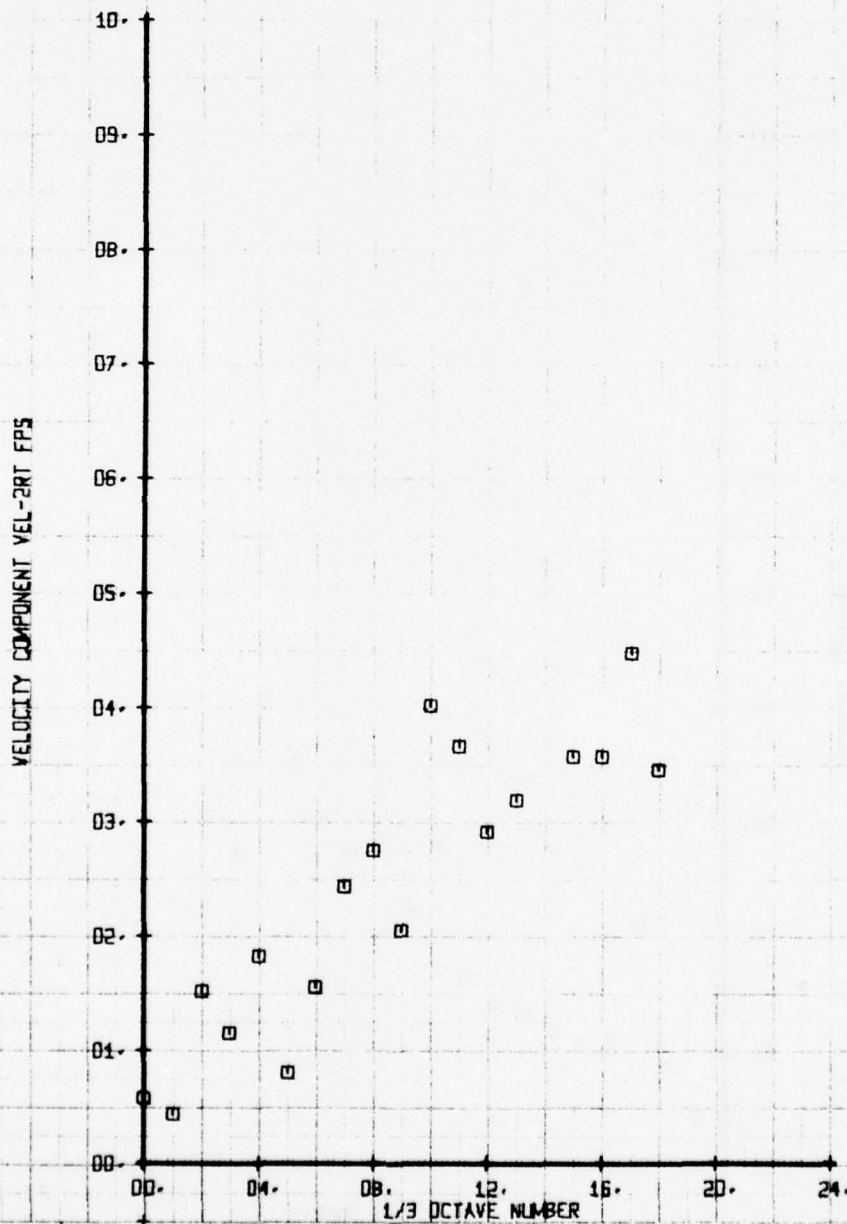
ET 5
 WT 169

198

SET 5
 BVWT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE BEHIND STAB.
 RUN 115 TP 4

LEGEND
 SYM CH PARAMETER
 □ 75 VEL-2RT



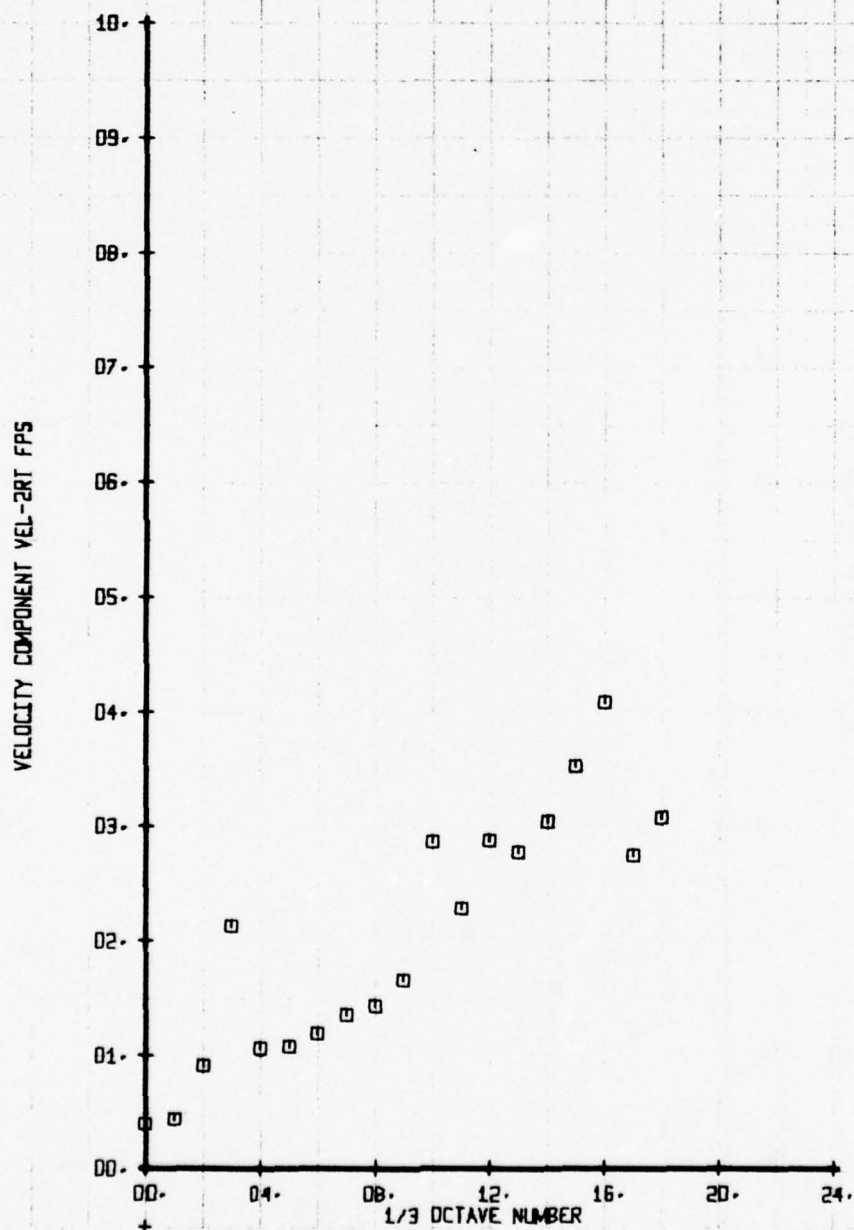
ET 5
 WT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE BEHIND STAB.
 RUN 115 TP 6

SYM
 □

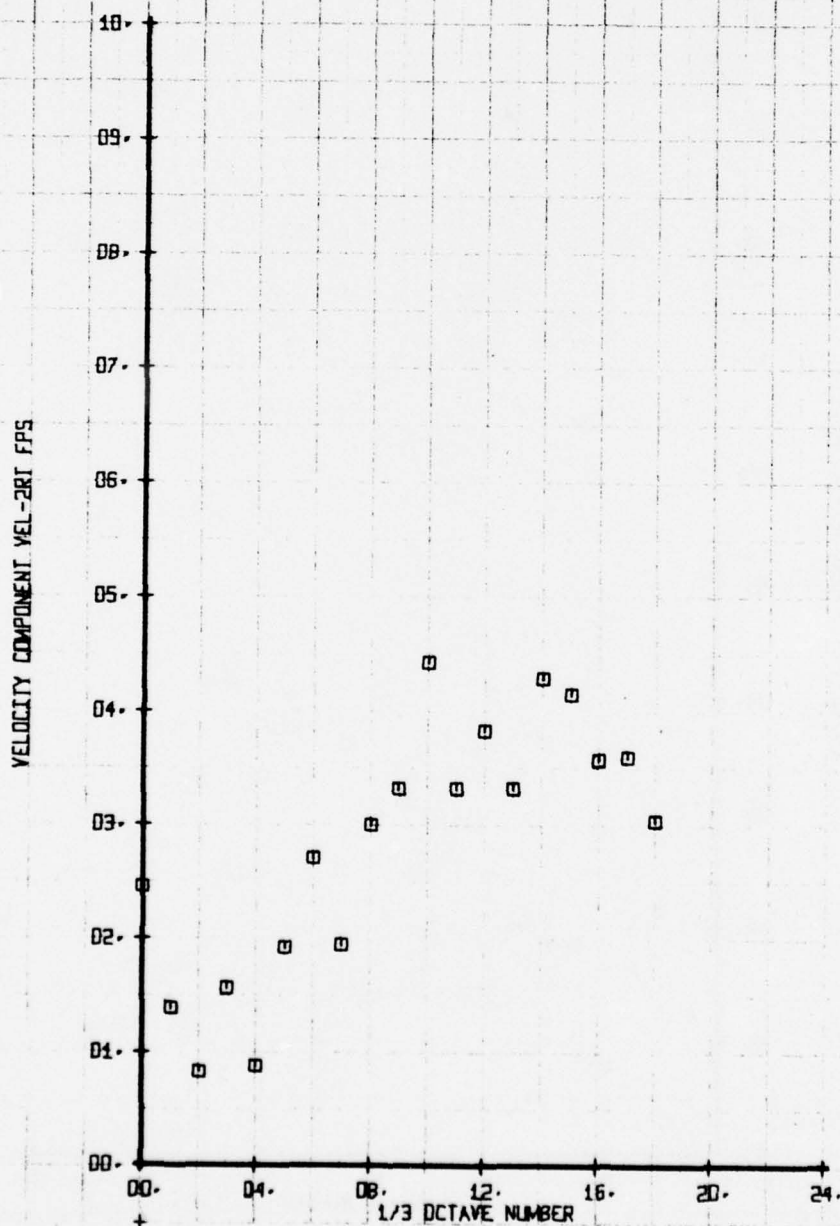
CH
 75

LEGEND
 PARAMETER
 VEL-2RT



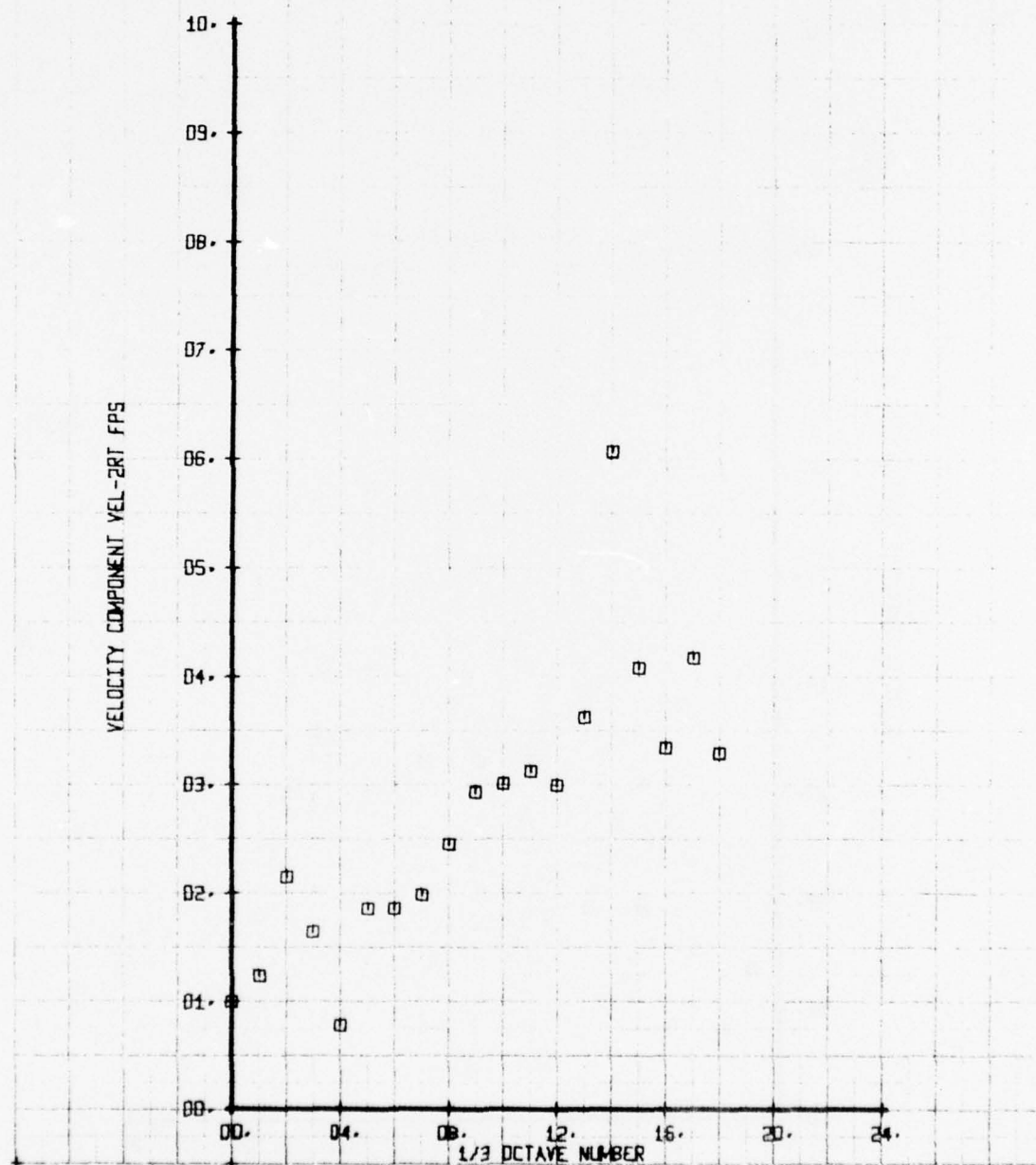
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE BEHIND STAB.
 RUN 115 TP 9

LEGEND
 SYM CH PARAMETER
 □ 75 VEL-2RT



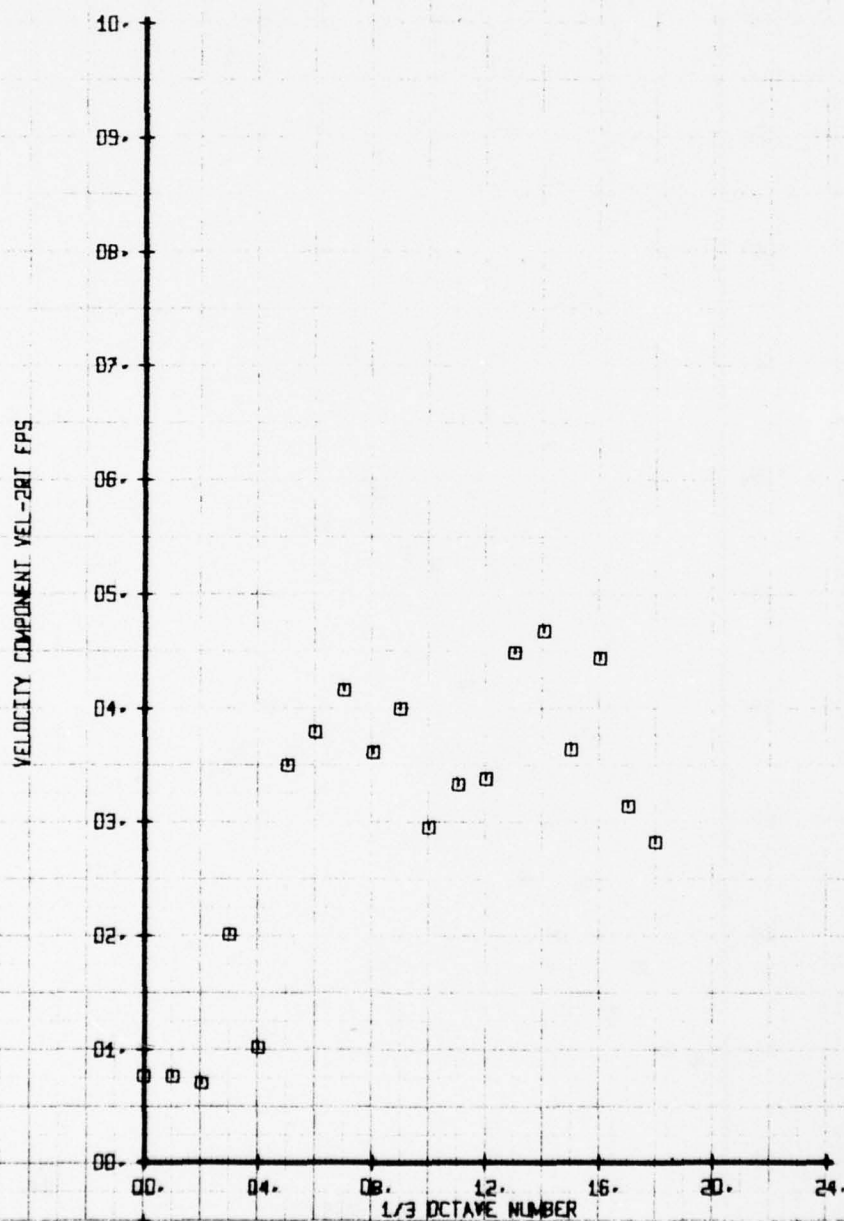
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE BEHIND STAB.
RUN 115 TP 10

LEGEND
SYM CH PARAMETER
□ 75 VEL-2RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE BEHIND STAB.
RUN 115 TP 12

LEGEND
SYM CH PARAMETER
□ 75 VEL-2RT

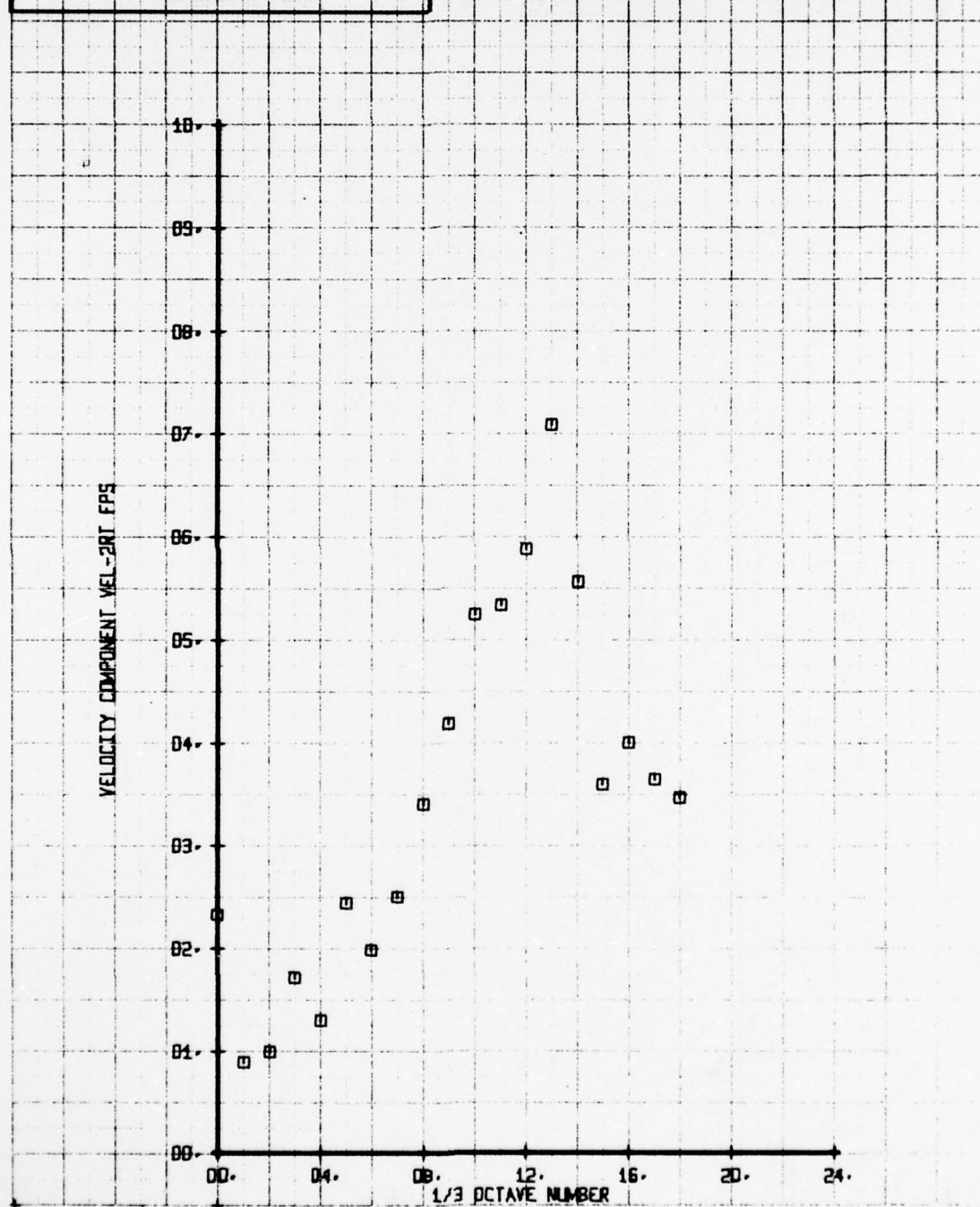


HOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE BEHIND STAR.
 RUN 115 TP 14

SYM
 □

CH
 75

LEGEND
 PARAMETER
 VEL-2RT



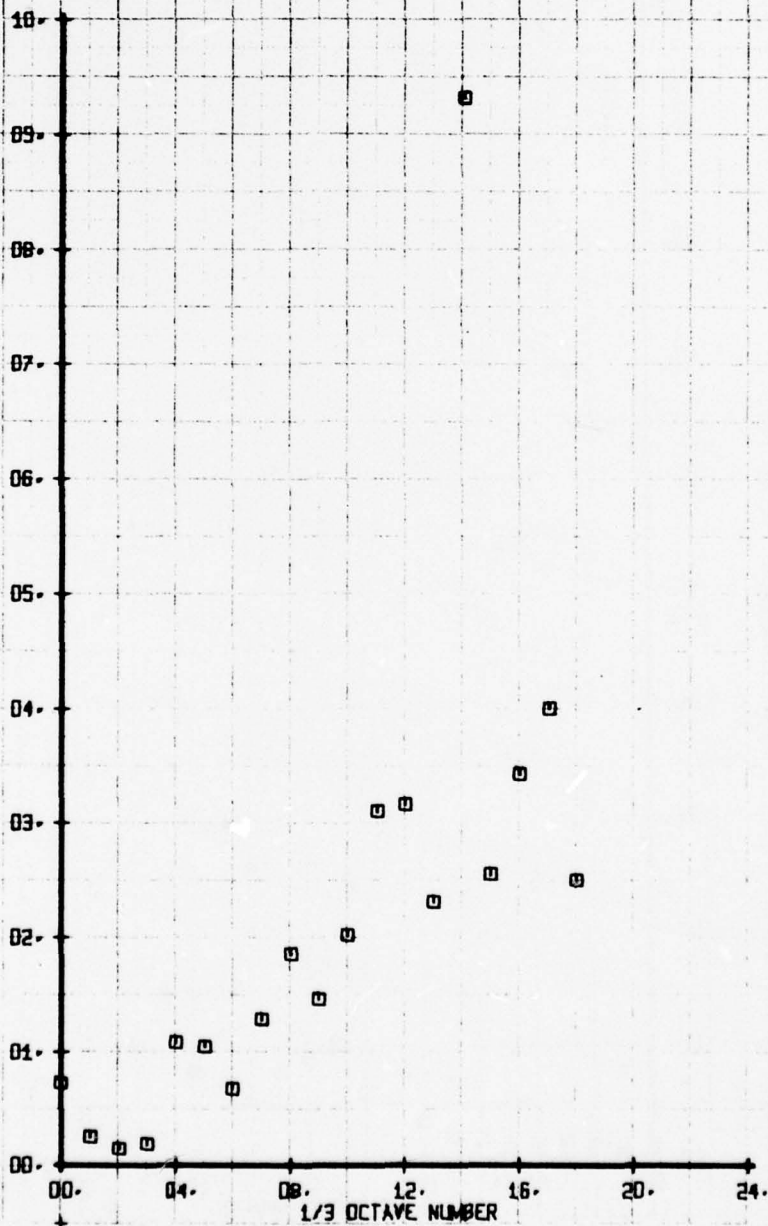
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE BEHIND STAR.
RUN 115 TP 16

SVM
0

CH
75

LEGEND
PARAMETER
VEL-2RT

VELOCITY COMPONENT VEL-2RT FPS

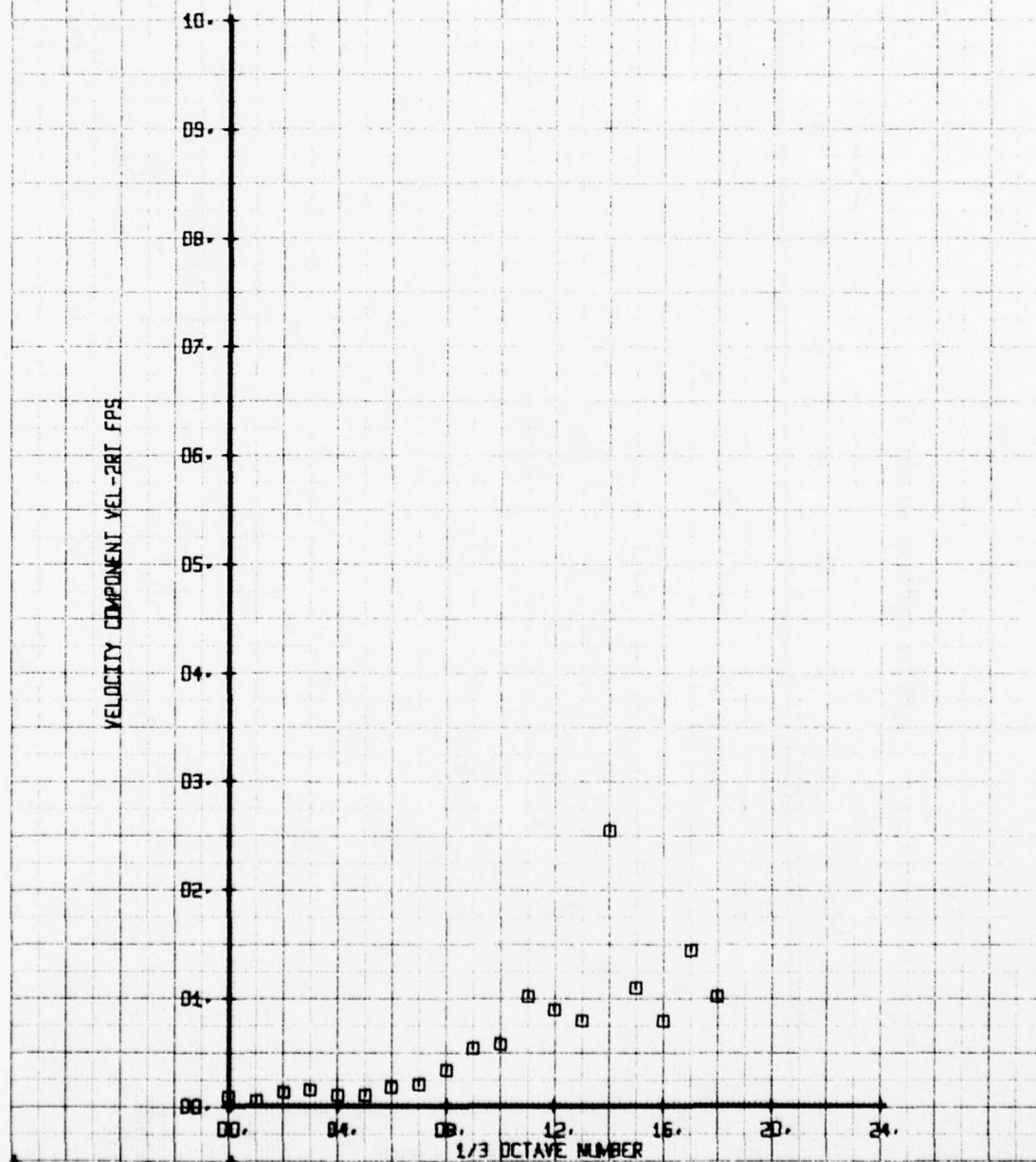


HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE BEHIND STAB.
RUN 115 TP 1B

SYM
□

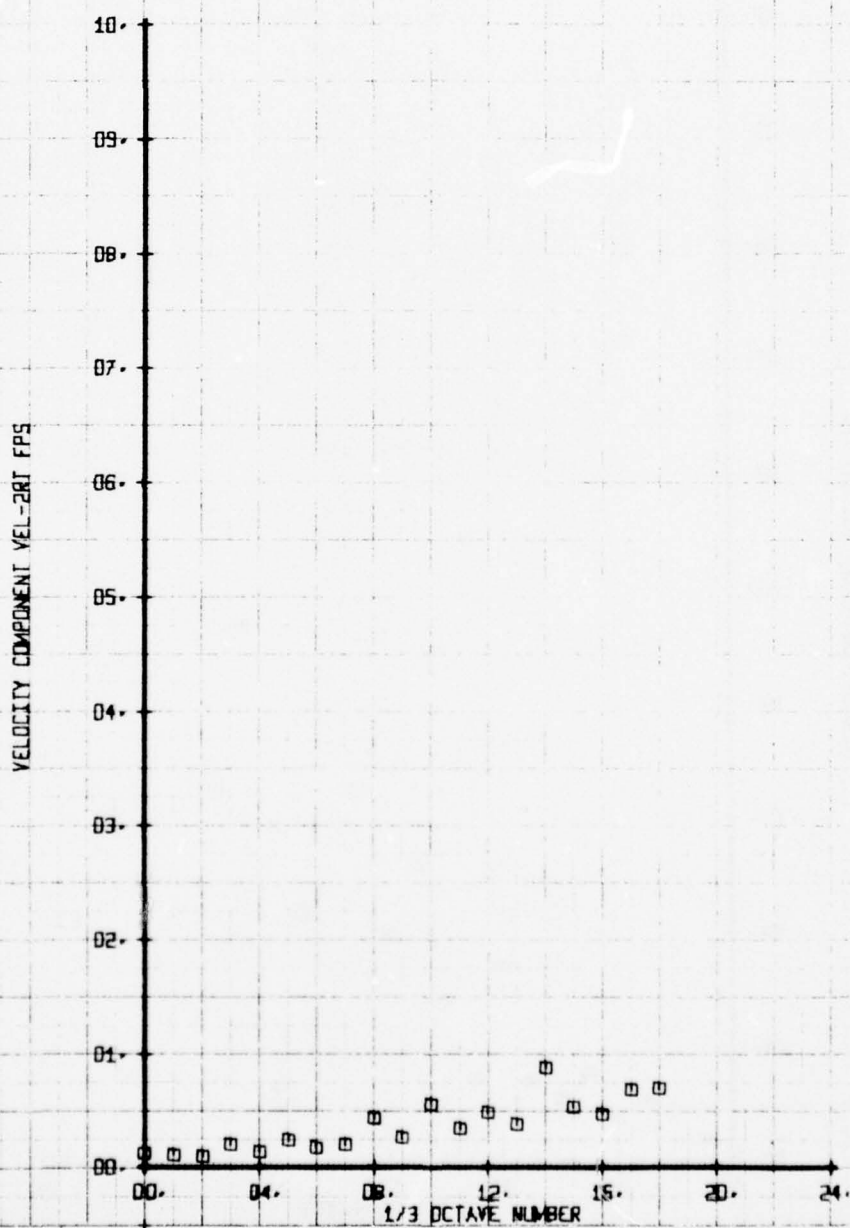
CH
75

LEGEND
PARAMETER
VEL-2RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE BEHIND STAB.
RUN 115 TP 20

LEGEND
SYM CH PARAMETER
□ 75 VEL-2RT



207

SET 5
BVWT 169

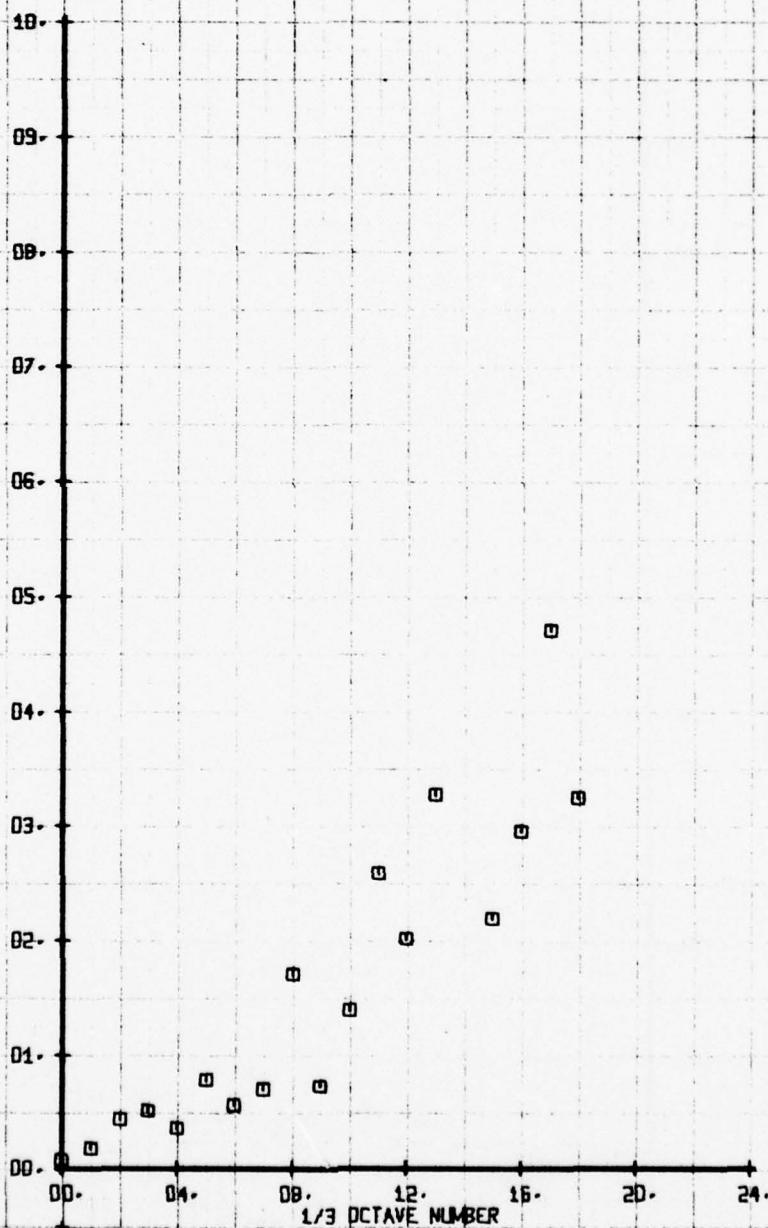
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE BEHIND STAB.
 RUN 115 TP 3

SYM
 □

CH
 74

LEGEND
 PARAMETER
 VEL-1RT

VELOCITY COMPONENT VEL-1RT FPS



ET 5
 WT 169

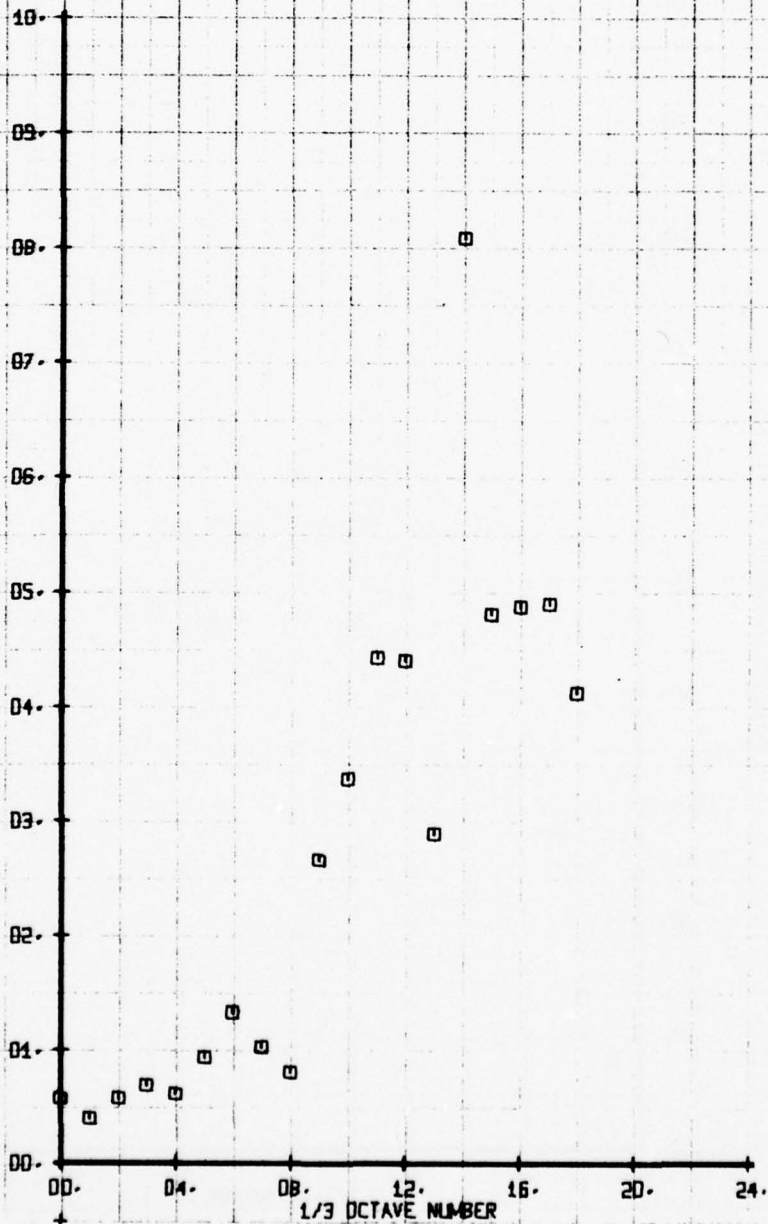
208

SET 5
 BVWT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE BEHIND STAB.
 RUN 115 TP 4

SYN CH PARAMETER
 0 74 VEL-1RT

VELOCITY COMPONENT VEL-1RT FPS

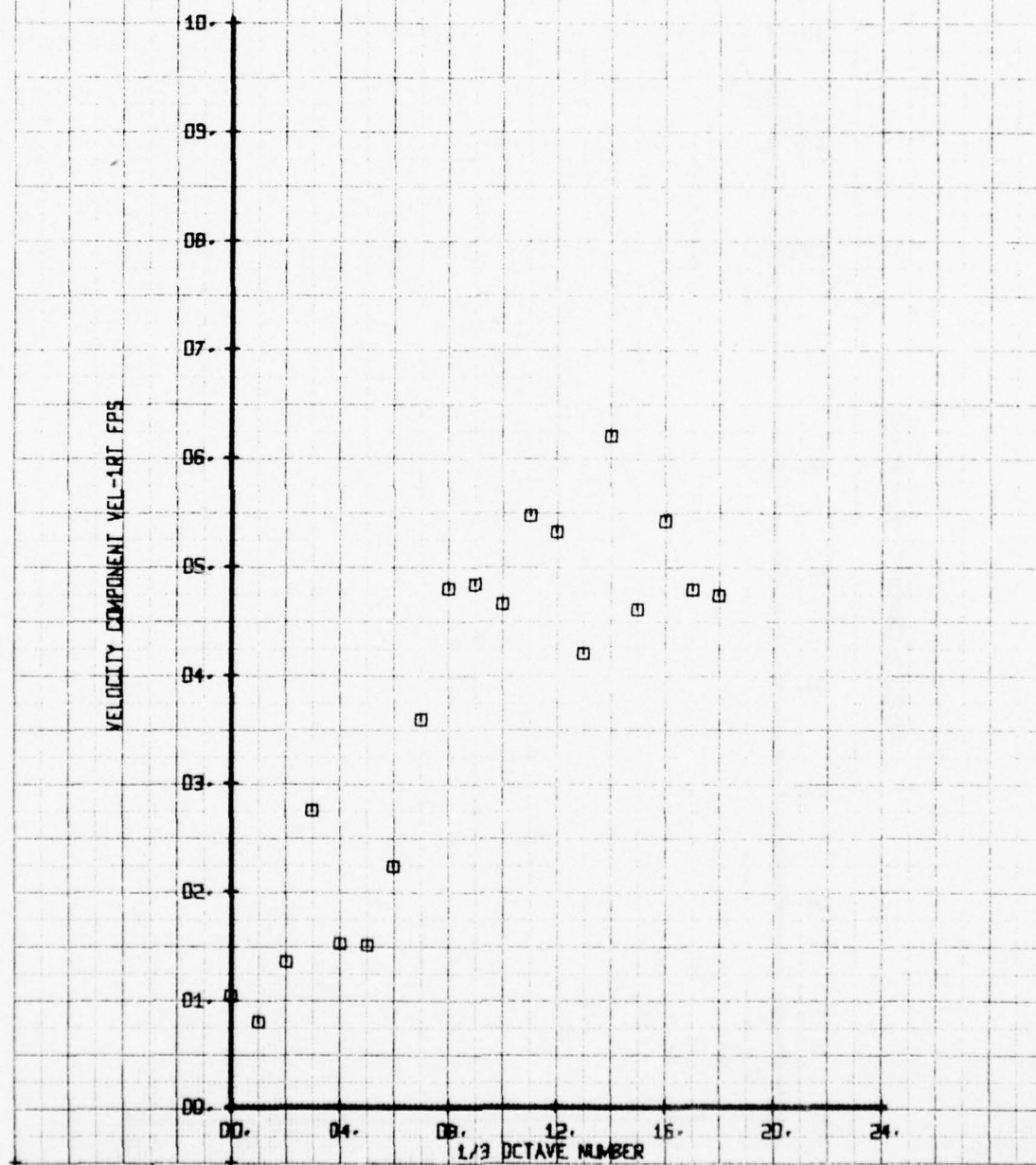


ET 5
 WT 169

HDT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE BEHIND STAB.
 RUN 115 TP 6

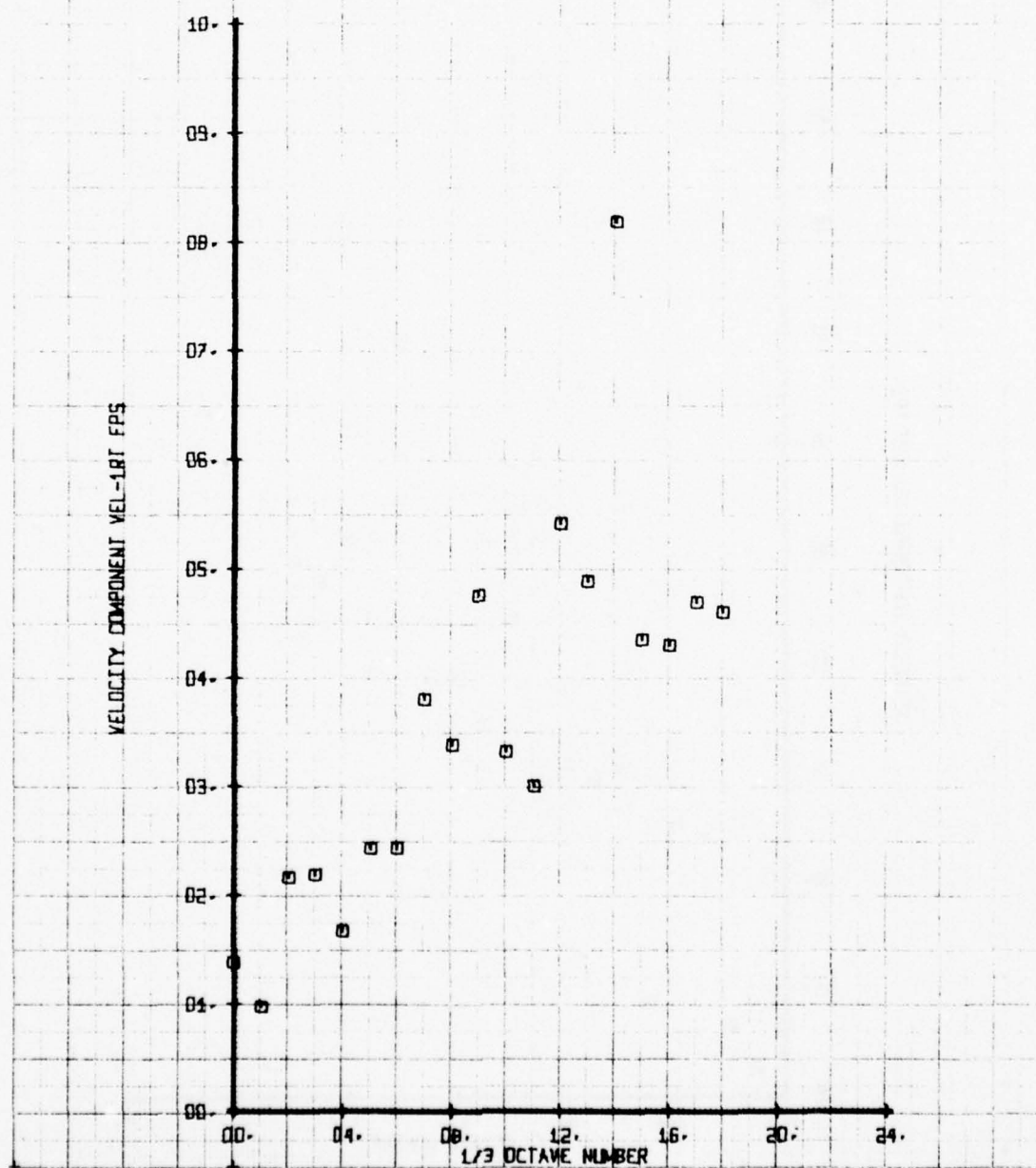
LEGEND
 SYM CH PARAMETER
 □ 74 VEL-1RT

VELOCITY COMPONENT VEL-1RT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE BEHIND STAB.
RUN 115 TP 9

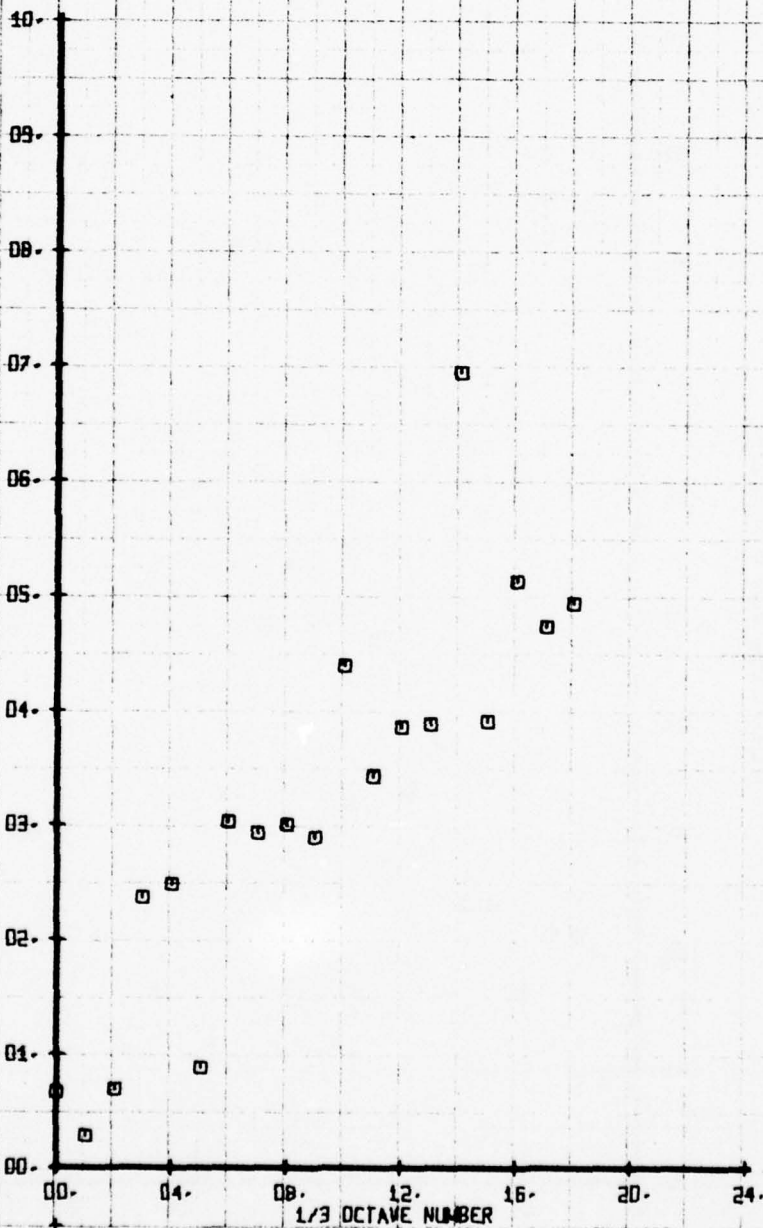
LEGEND
SYM CH PARAMETER
□ 74 VEL-1RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE BEHIND STAB.
 RUN 115 TP 10

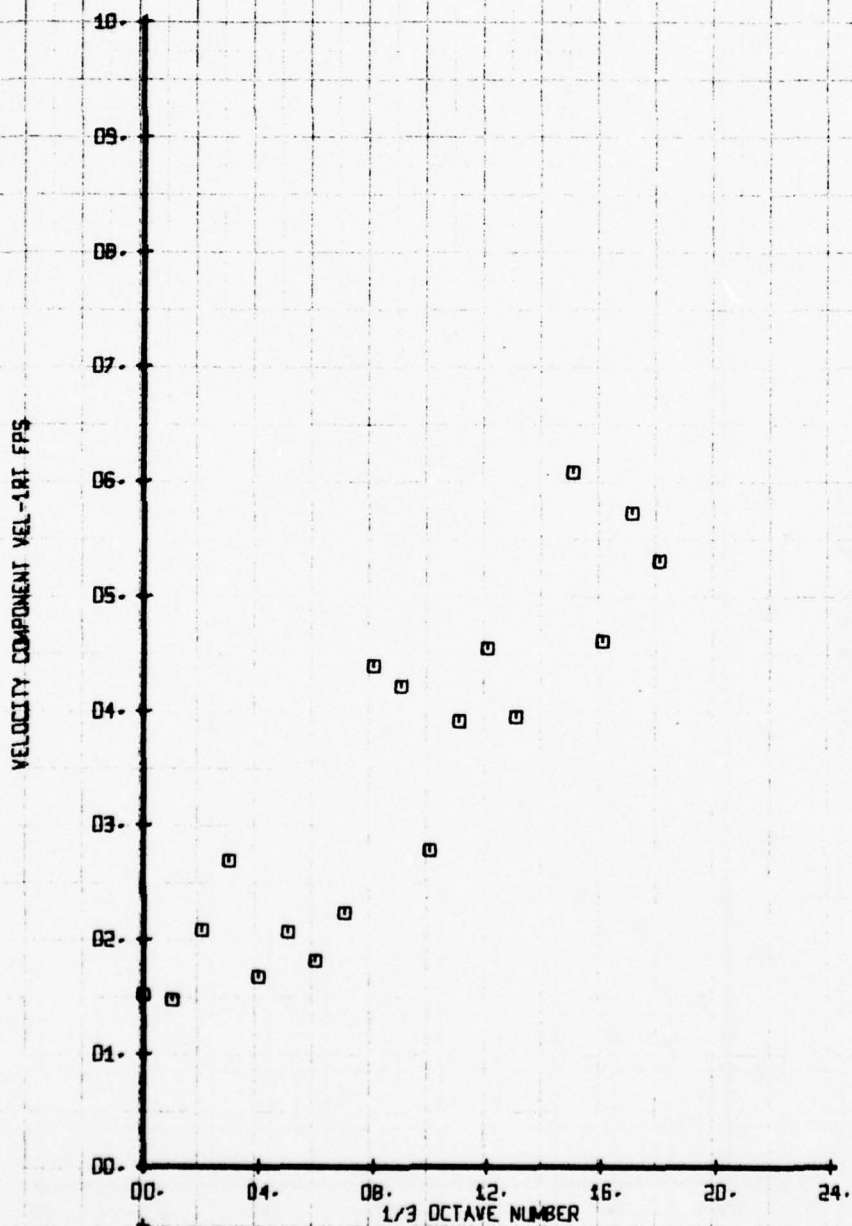
LEGEND
 SYM CH PARAMETER
 □ 74 VEL-1RT

VELOCITY COMPONENT VEL-1RT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE BEHIND STAB.
 RUN 145 TP 12

LEGEND
 SYM CH PARAMETER
 □ 74 VEL-1RT



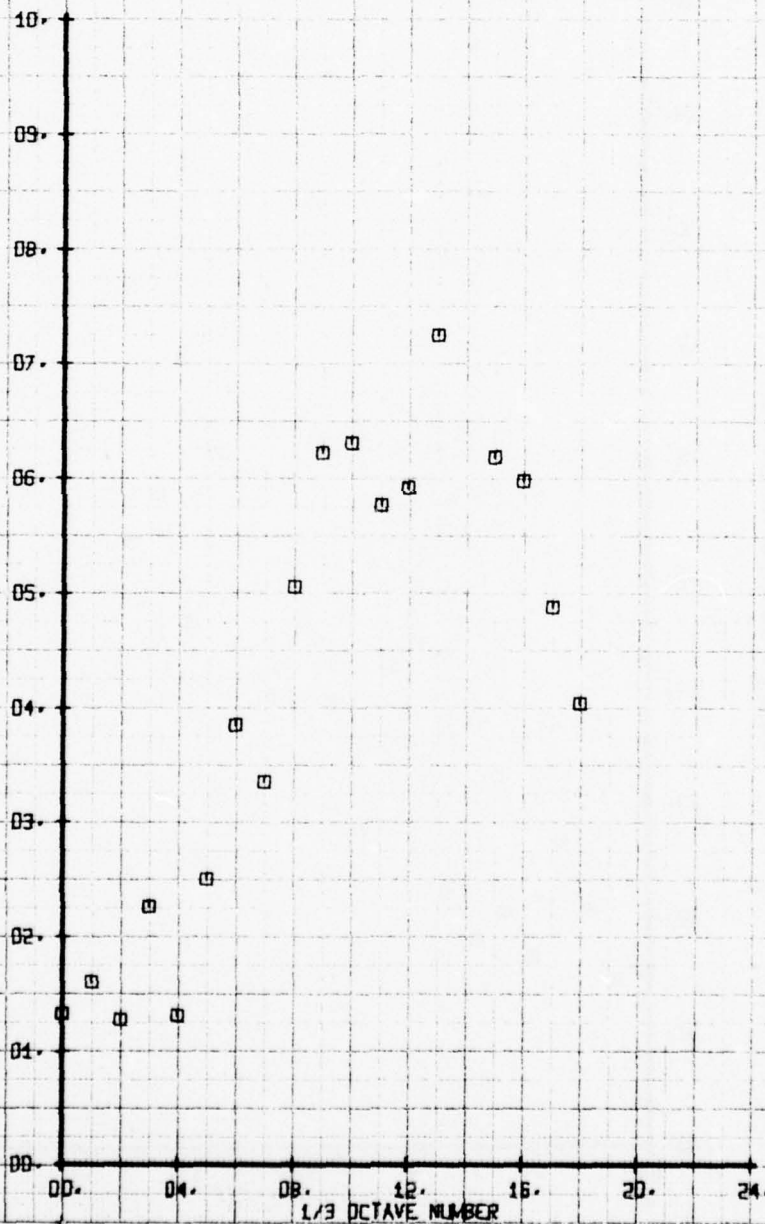
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE BEHIND STAB.
RUN 115 TP 14

SYM
□

CH
74

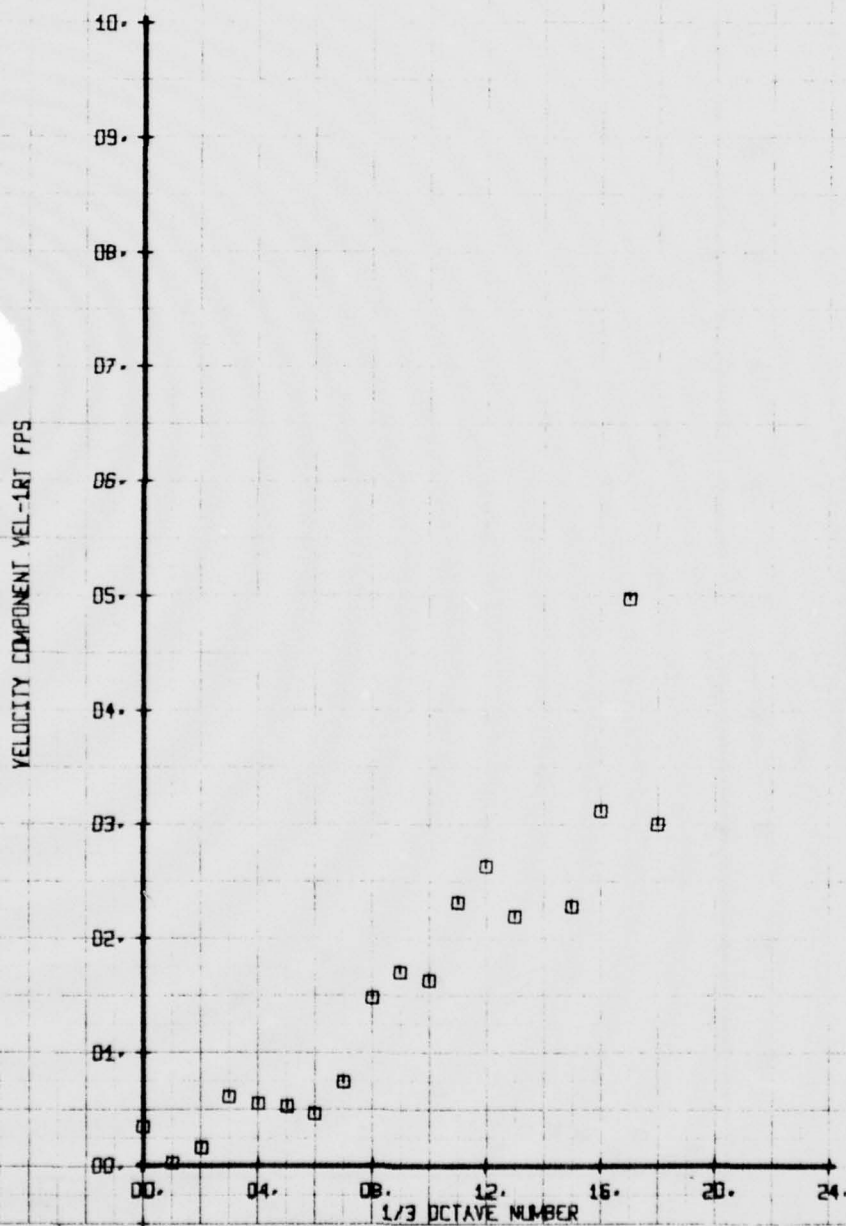
LEGEND
PARAMETER
VEL-1RT

VELOCITY COMPONENT VEL-1RT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE BEHIND STAB.
RUN 115 TP 16

LEGEND
SYM CH PARAMETER
□ 74 VEL-1RT

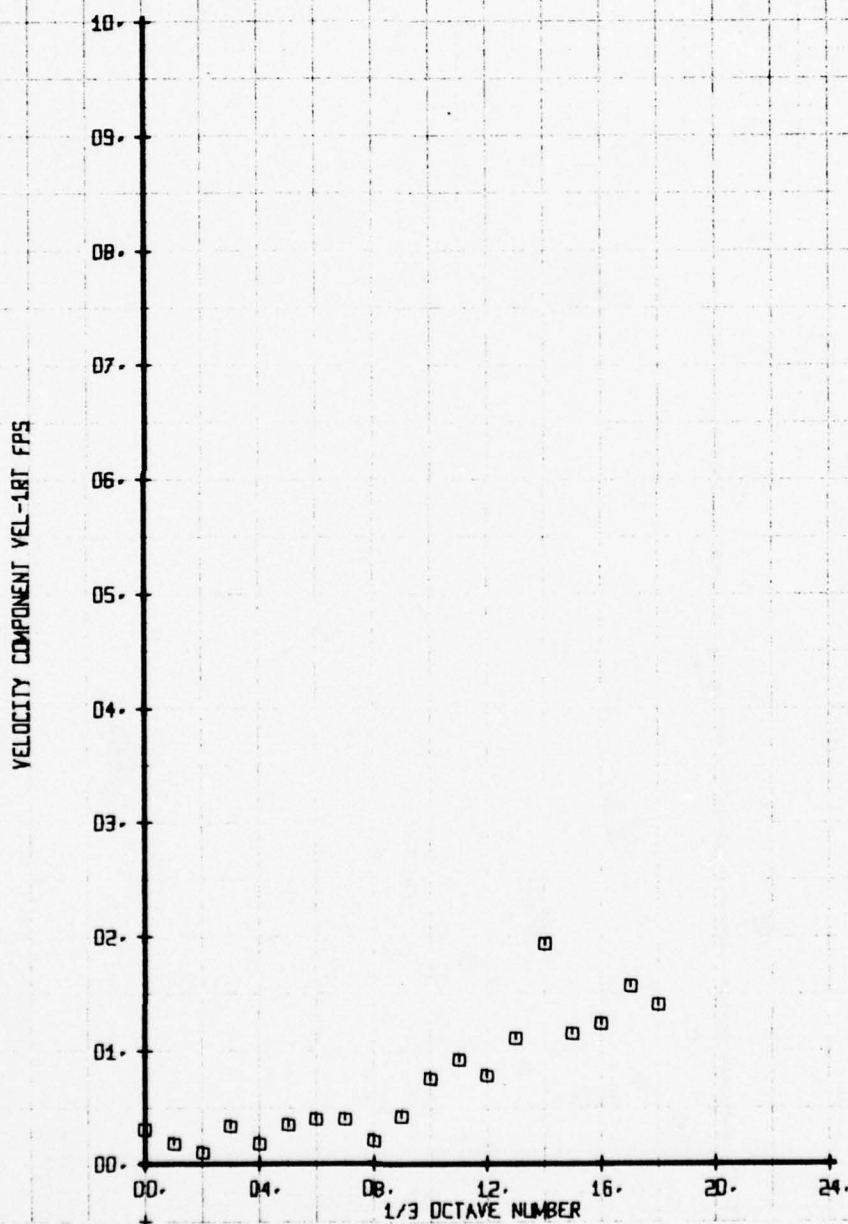


HOT FILM WAVE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE BEHIND STAB.
RUN 115 TP 18

SYM
□

CH
74

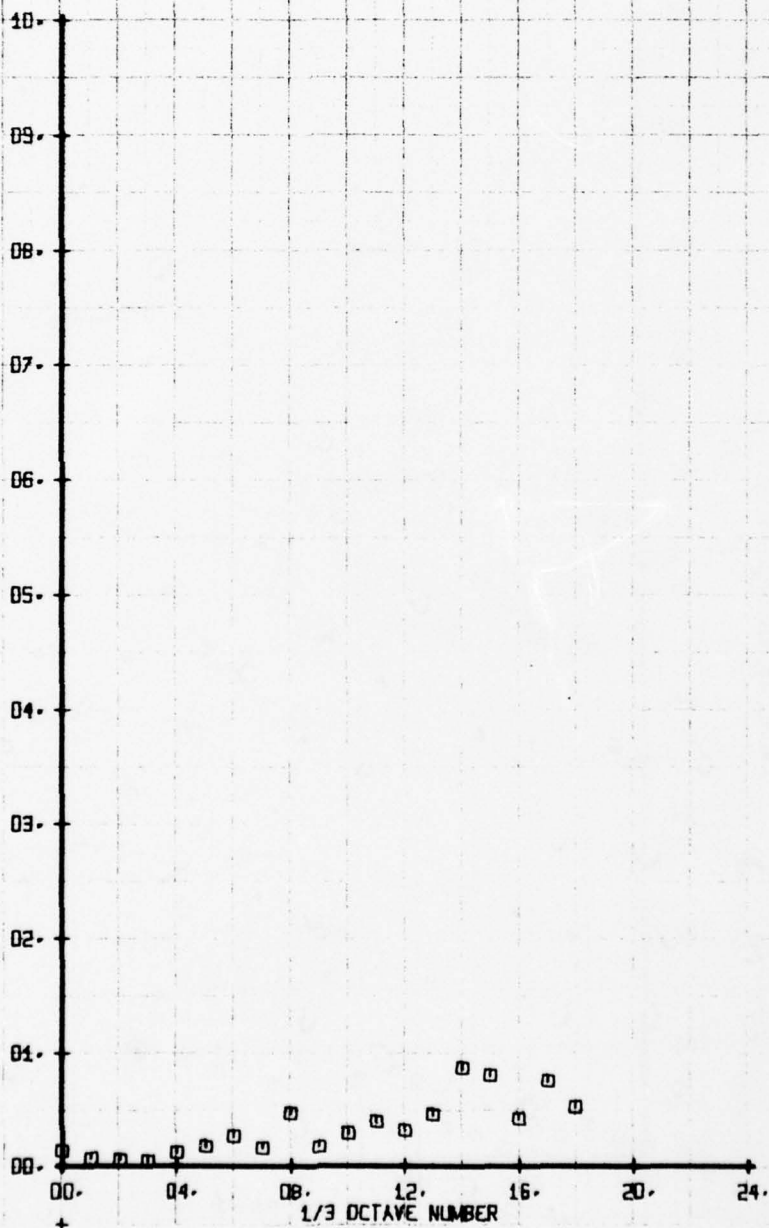
LEGEND
PARAMETER
VEL-1RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE BEHIND STAB.
 RUN 115 TP 20

SYM	CH	LEGEND	PARAMETER
0	74		VEL-1RT

VELOCITY COMPONENT VEL-1RT FPS

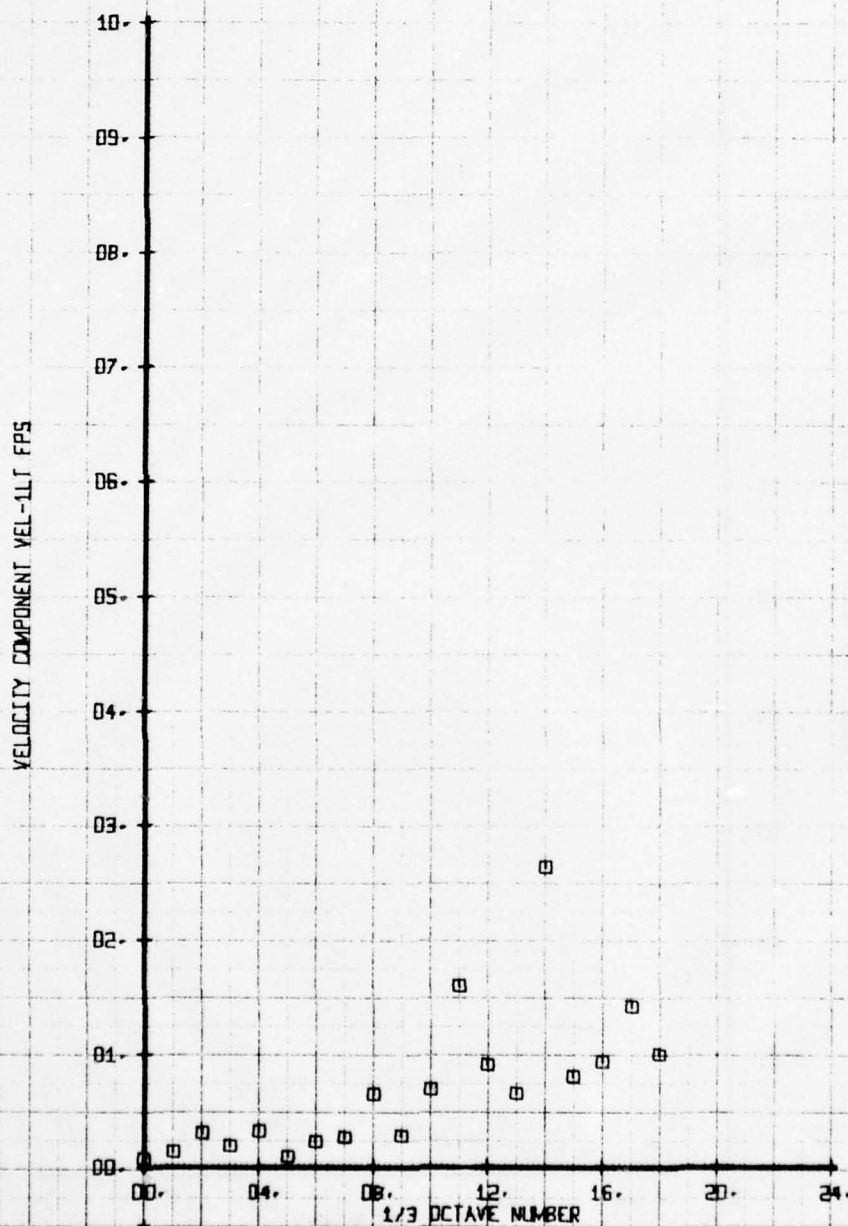


217

SET 5
 BVWT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE BEHIND STAB.
 RUN 115 TP 3

LEGEND
 SYM CH PARAMETER
 □ 73 VEL-1LT



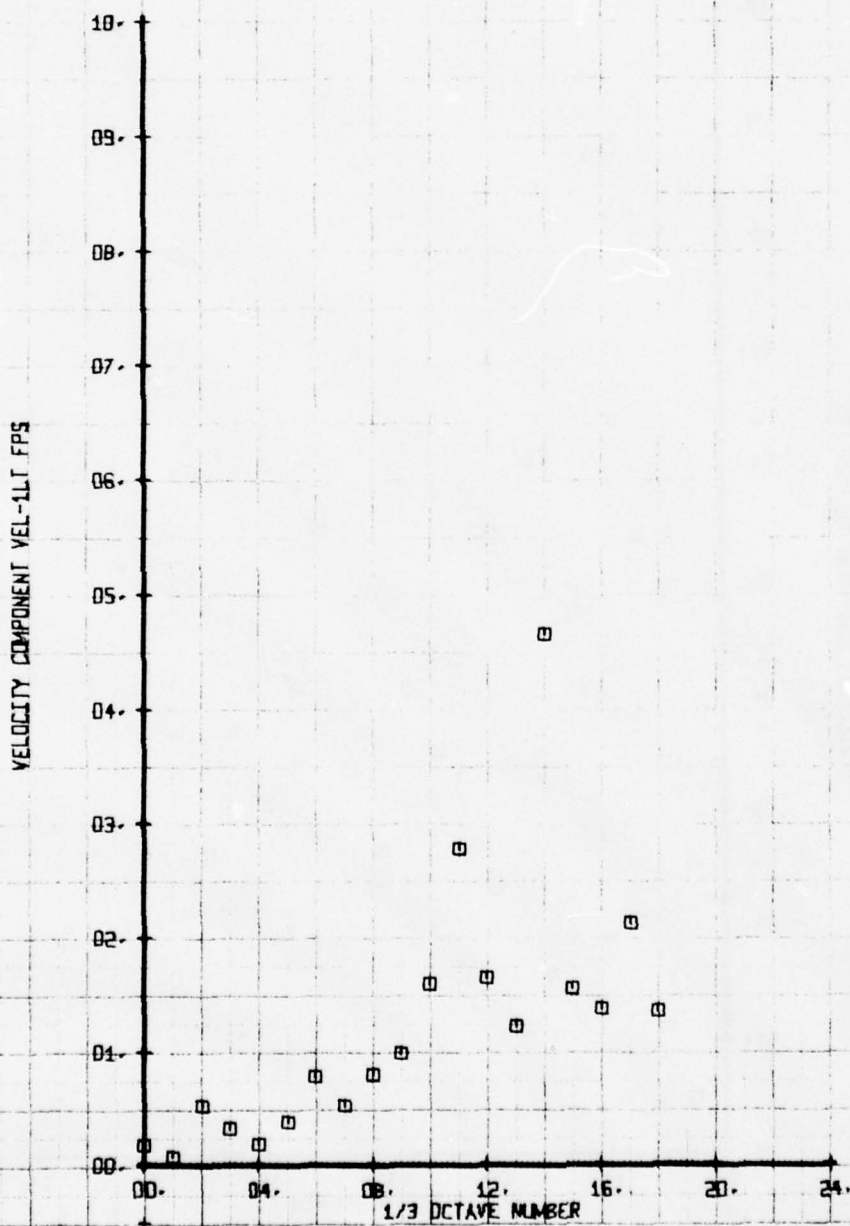
ET 5
 WT 169

218

SET 5
 BVWT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE BEHIND STAB.
 RUN 115 TP 4

LEGEND
 SYM CH. PARAMETER
 □ 73 VEL-1LT



ET 5
 WT 169

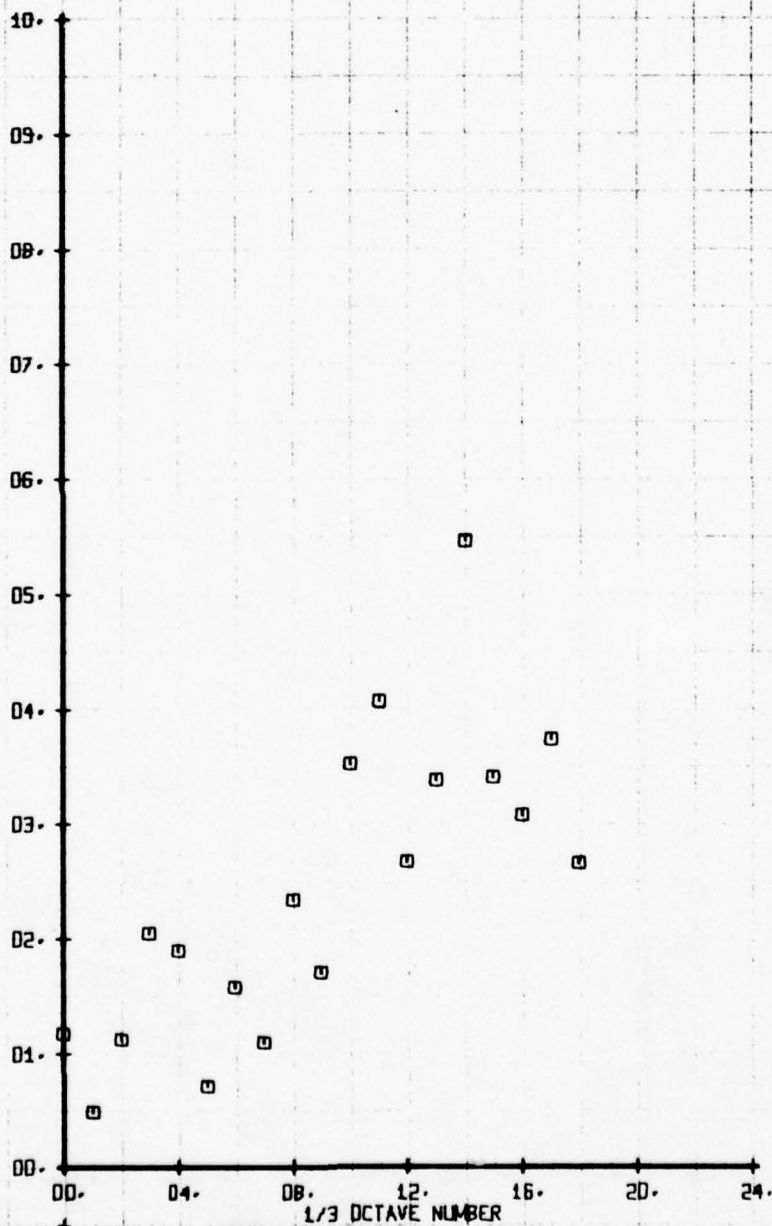
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE BEHIND STAB.
 RUN 115 TP 6

SYM
 □

CH
 73

LEGEND
 PARAMETER
 VEL-1LT

VELOCITY COMPONENT VEL-1LT FPS



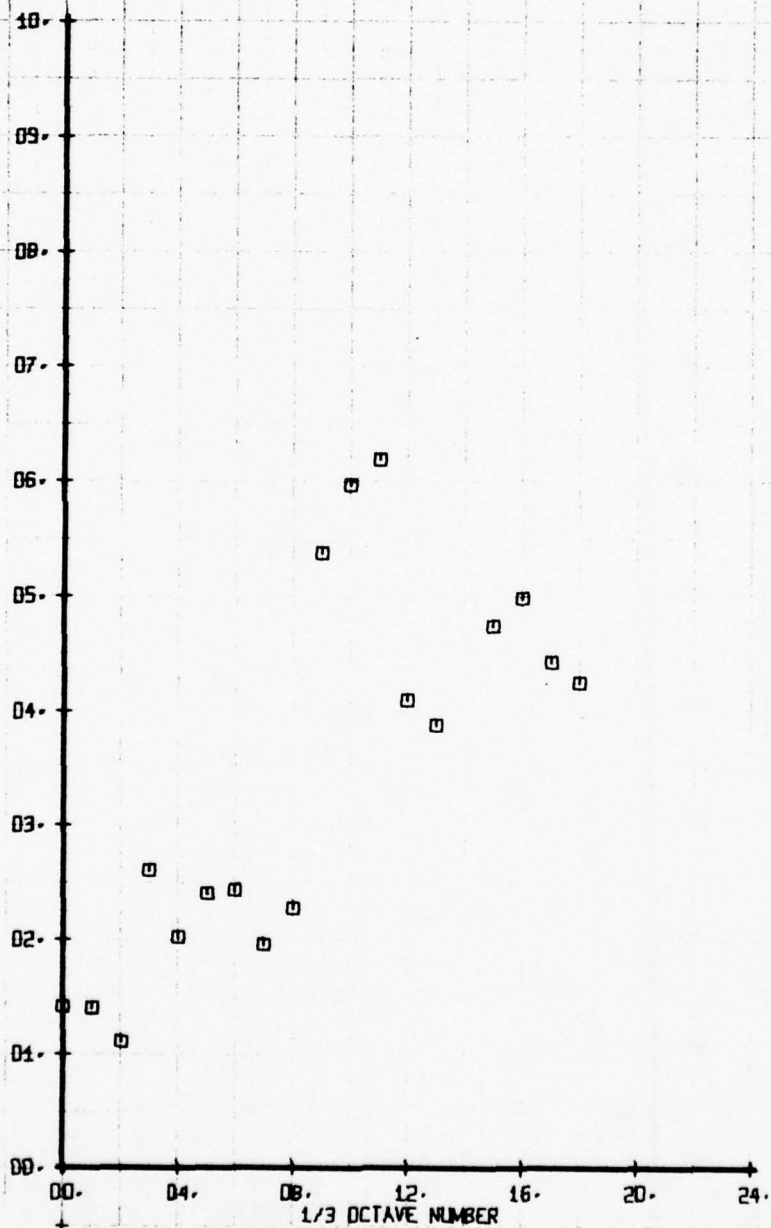
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE BEHIND STAB.
 RUN 115 TP 9

SYM
 □

CH
 73

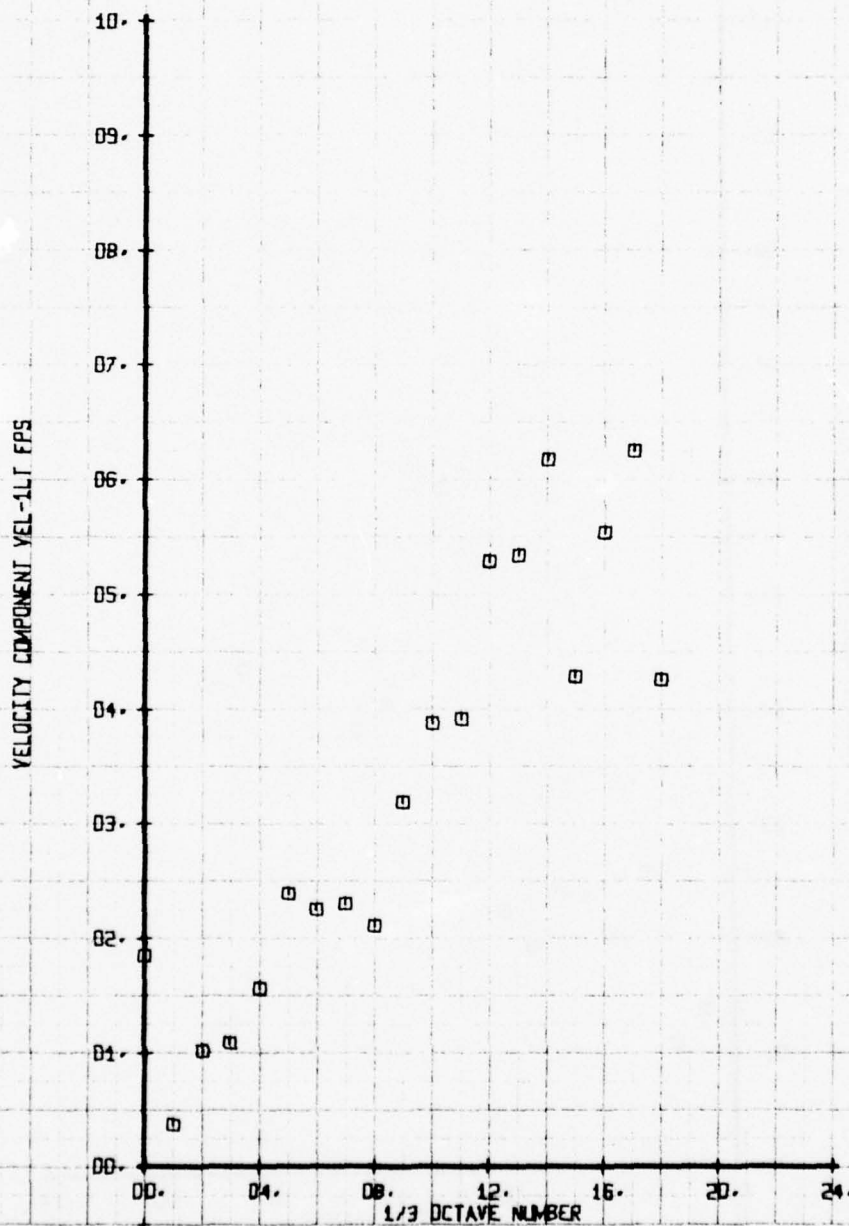
LEGEND
 PARAMETER
 VEL-1LT

VELOCITY COMPONENT VEL-1LT FPS



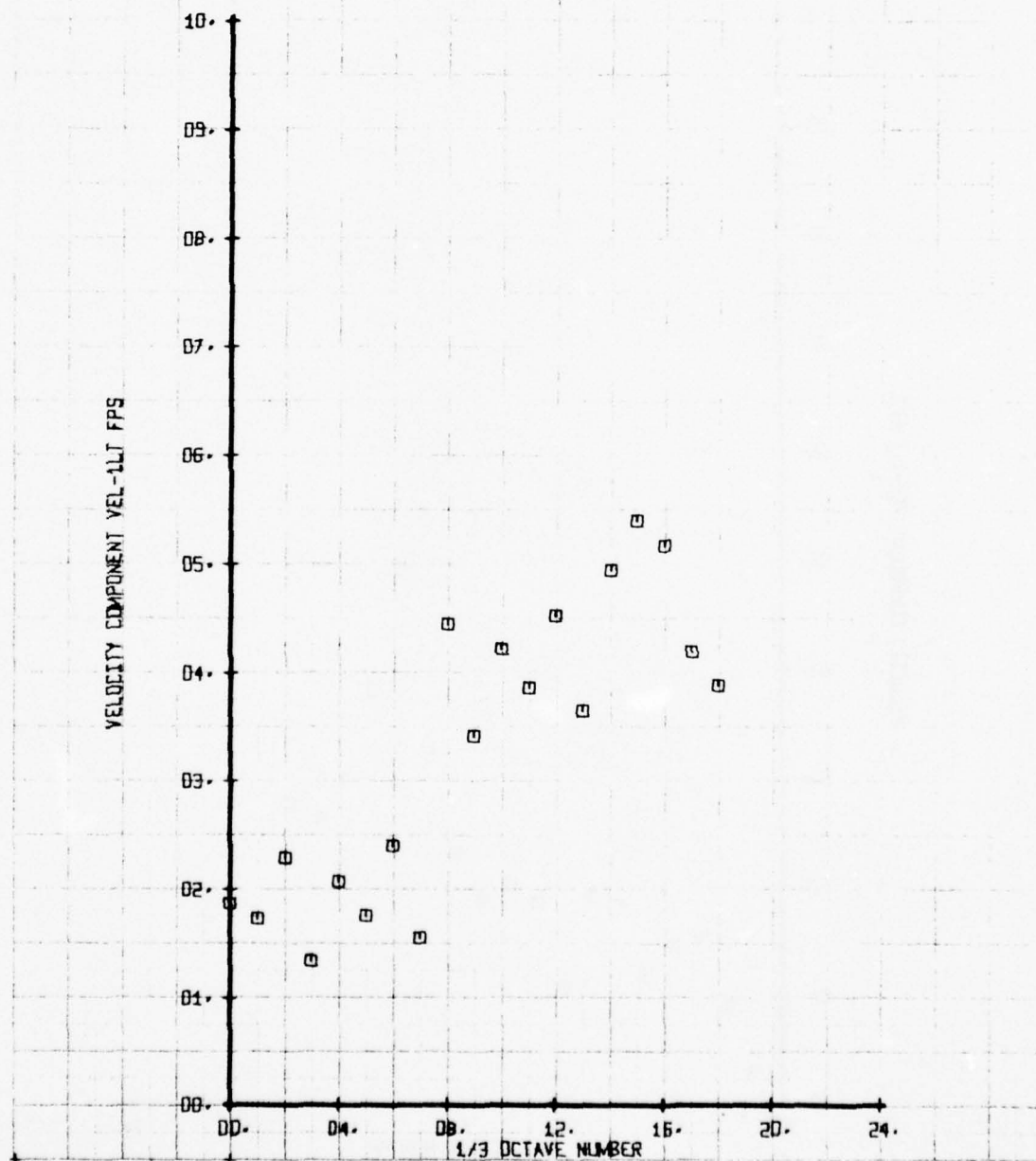
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE BEHIND STAB.
RUN 115 TP 10

LEGEND
SYM CH PARAMETER
□ 73 VEL-1LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE BEHIND STAB.
RUN 115 TP 12

LEGEND
SYM CH: PARAMETER
□ 73 VEL-1LT

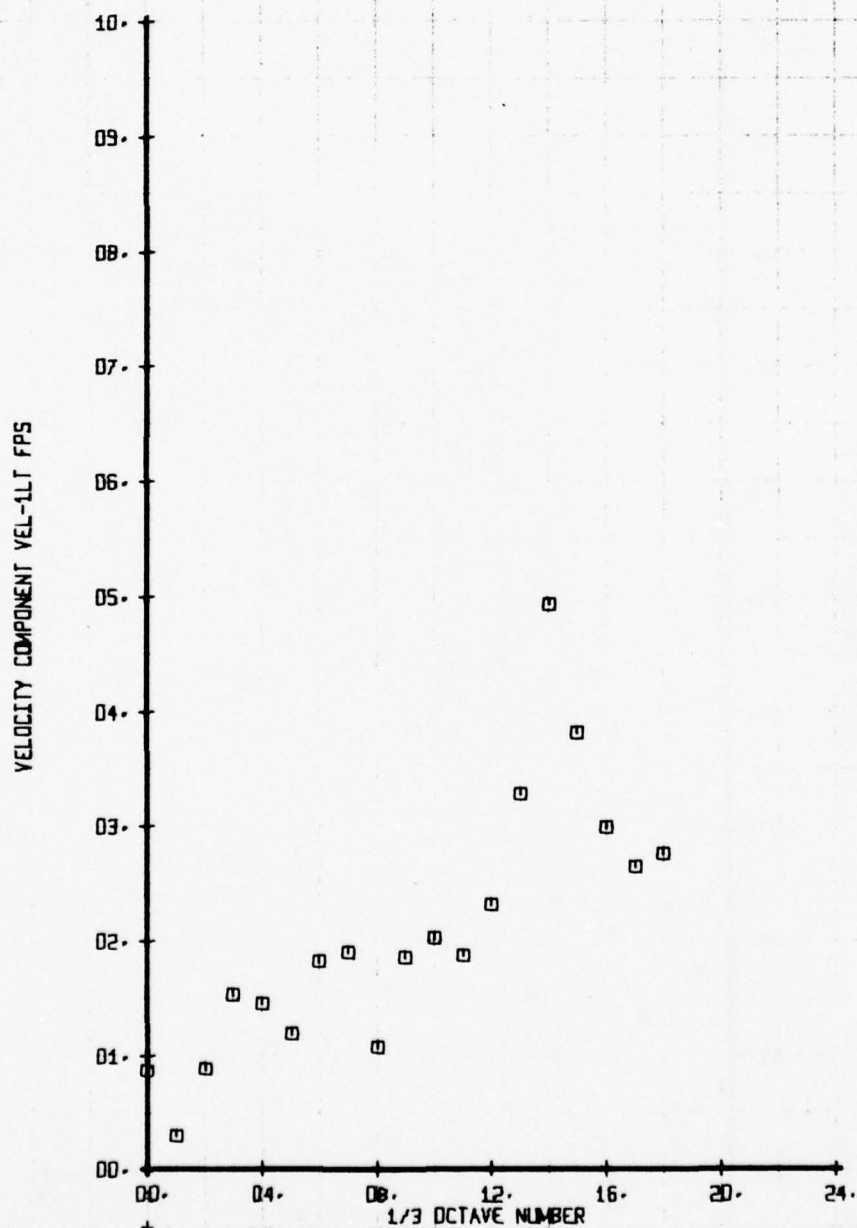


HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE BEHIND STAB.
RUN 115 TP 14

SYM
□

CH
73

LEGEND
PARAMETER
VEL-1LT



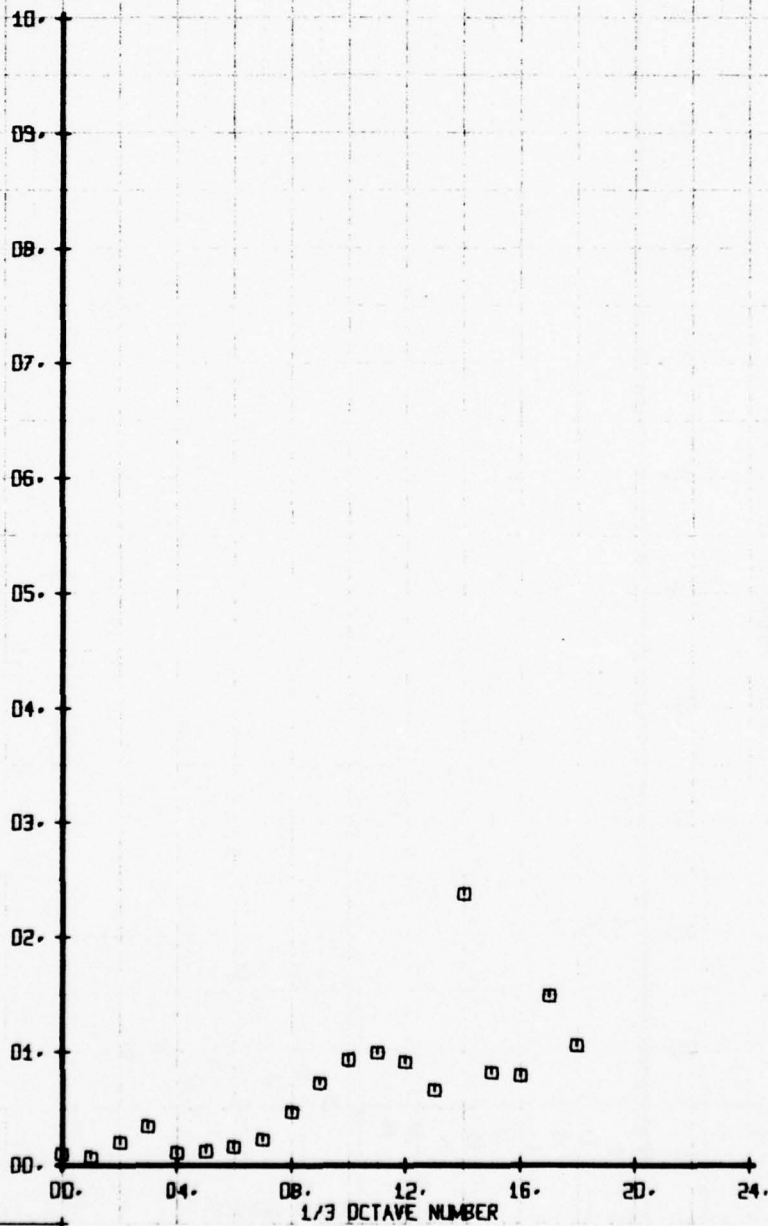
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE BEHIND STAB.
 RUN 115 TP 16

SYM
 □

CH
 73

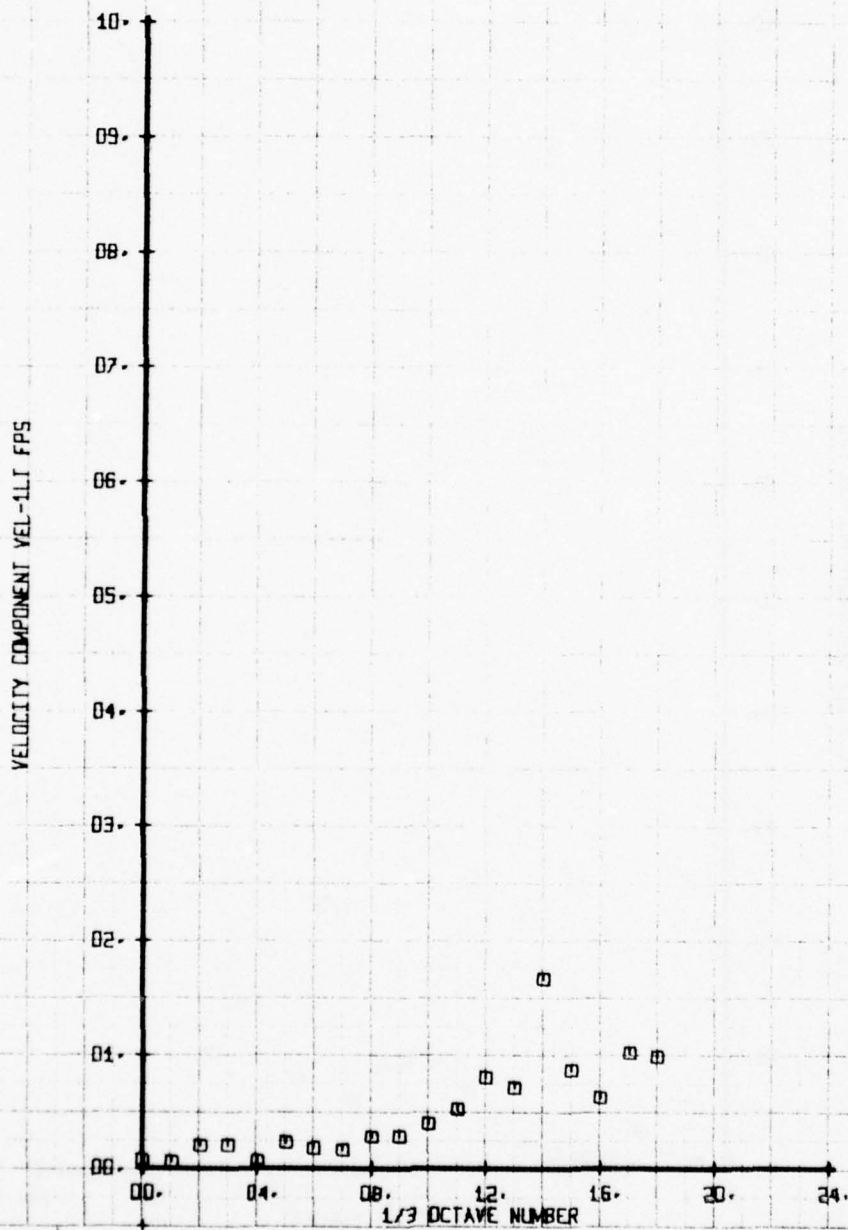
LEGEND
 PARAMETER
 VEL-1LT

VELOCITY COMPONENT VEL-1LT FPS



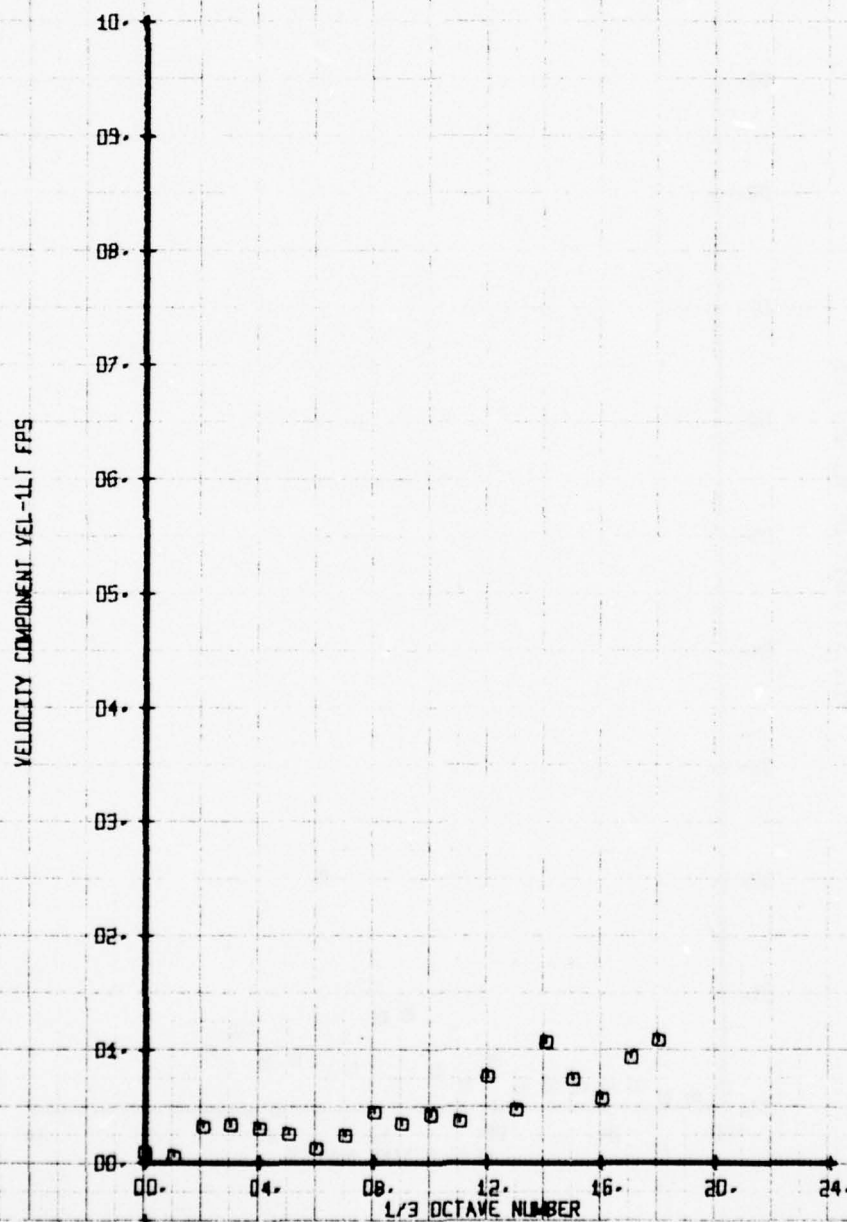
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE BEHIND STAB.
RUN 115 TP 1B

LEGEND
SYM CH PARAMETER
□ 73 VEL-1LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE BEHIND STAB.
RUN 115 TP 20

LEGEND
SYM CH PARAMETER
□ 73 VEL-1LT



227

SET 5
BVWT 169

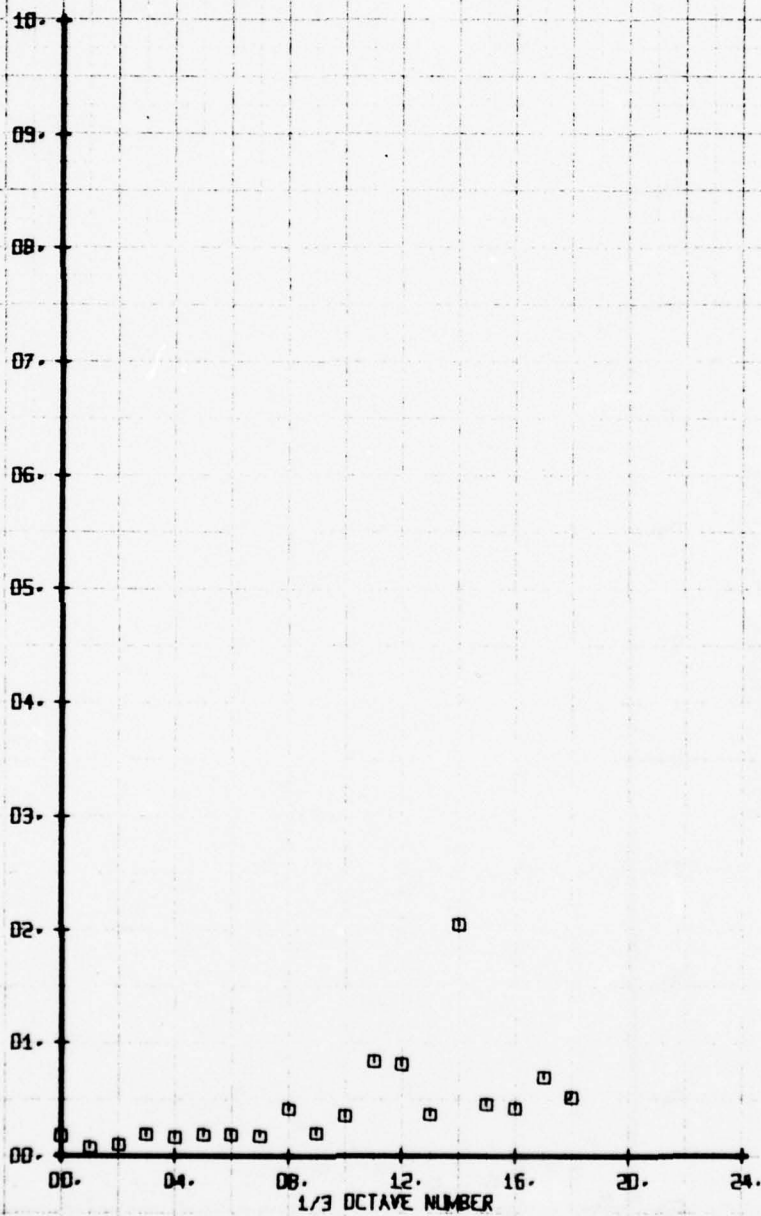
HOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE BEHIND STAB.
 RUN 115 TP 3

SYM
 0

CH
 72

LEGEND
 PARAMETER
 VEL-2LT

VELOCITY COMPONENT VEL-2LT FPS



ET 5
 WT 169

228

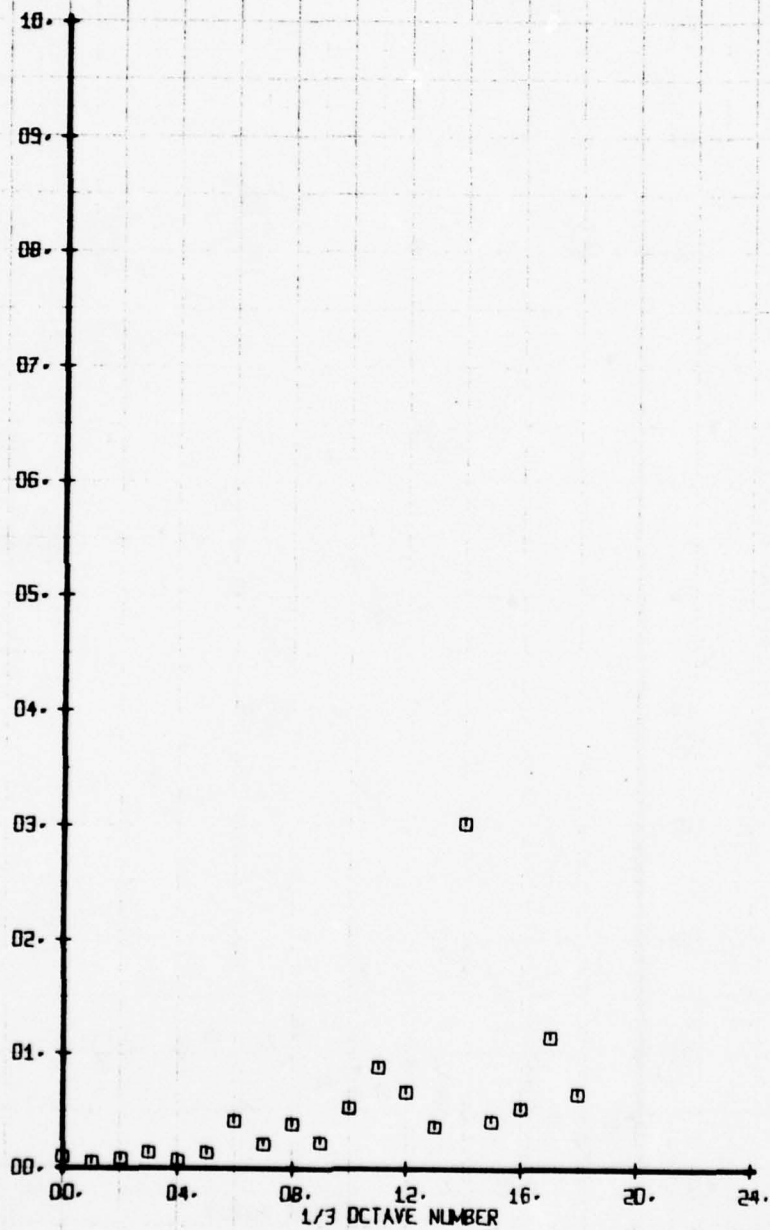
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE BEHIND STAB.
 RUN 115 TP 4

SYM
 0

CH
 72

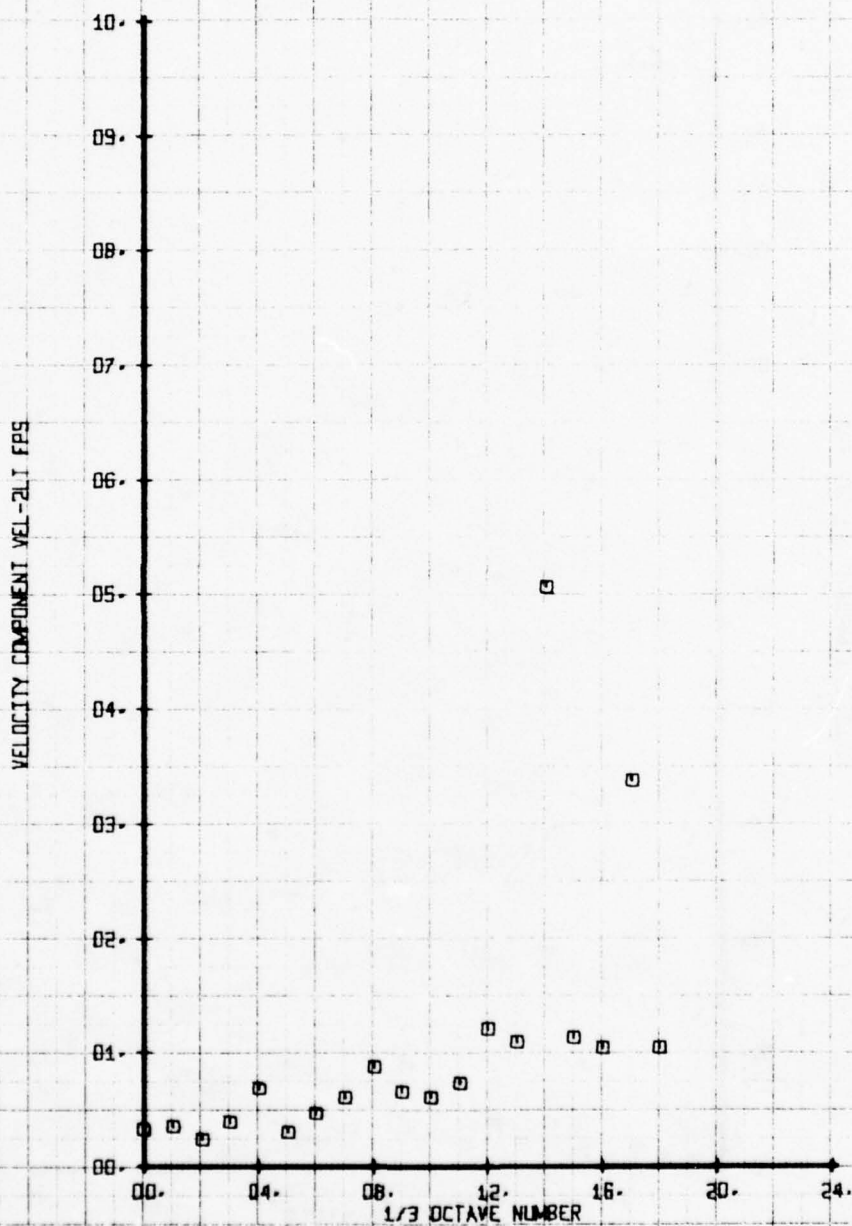
LEGEND
 PARAMETER
 VEL-2LT

VELOCITY COMPONENT VEL-2LT FPS



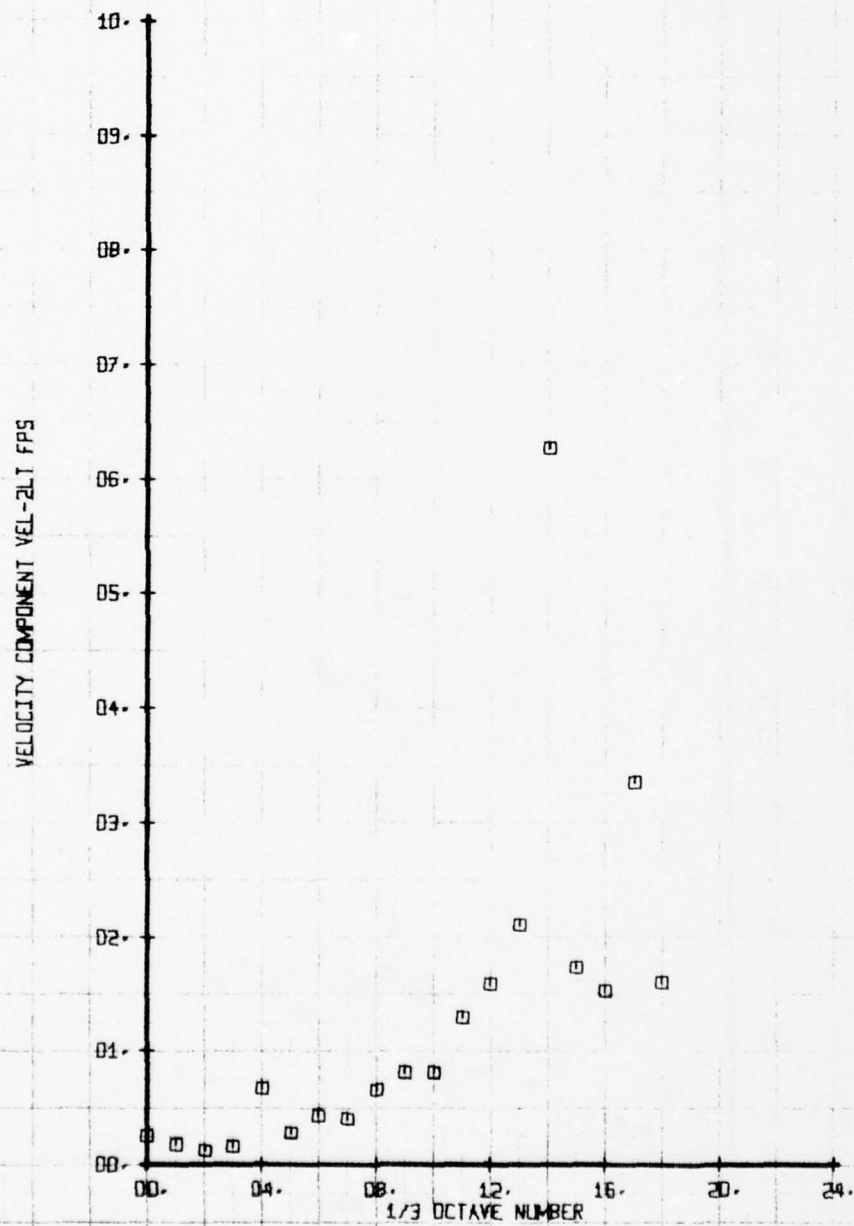
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE BEHIND STAB.
RUN 115 TP 6

SYM CH PARAMETER
□ 72 VEL-2LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE BEHIND STAB.
RUN 115 TP 9

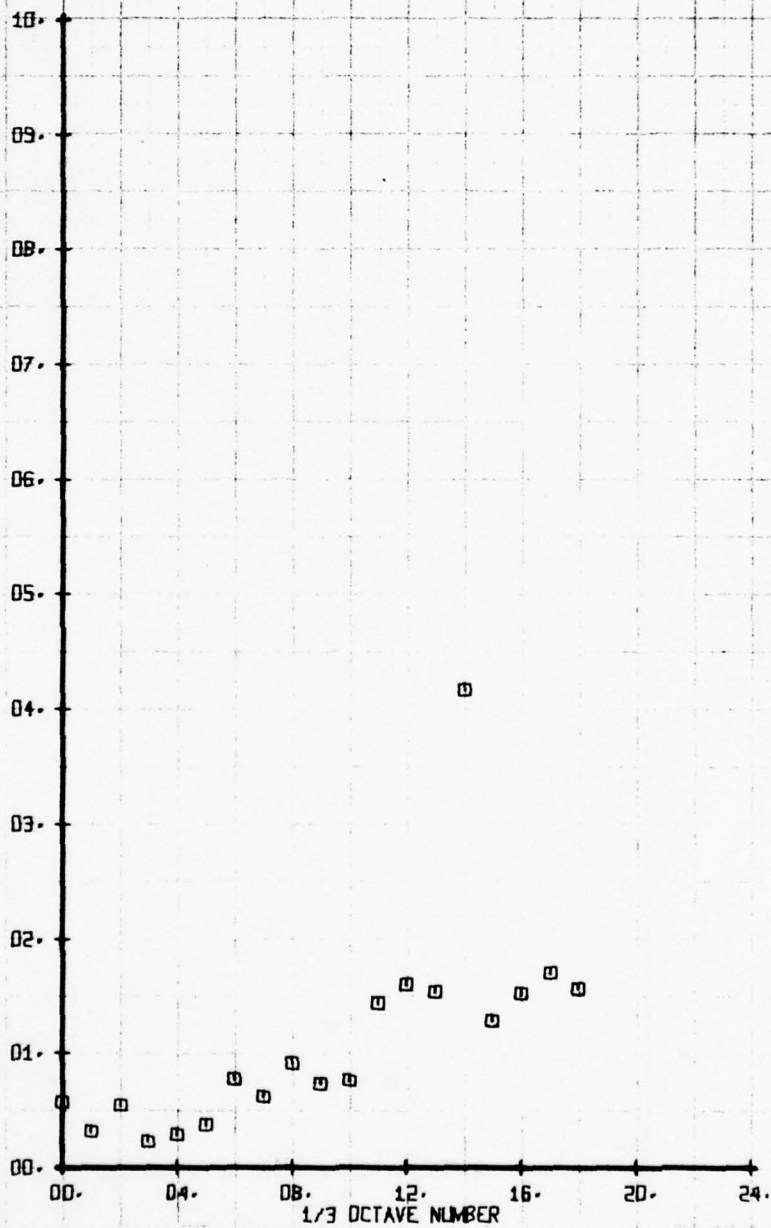
LEGEND
SYM CH PARAMETER
□ 72 VEL-2LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE BEHIND STAB.
 RUN 115 TP 10

SYM	CH	PARAMETER
□	72	VEL-2LT

VELOCITY COMPONENT VEL-2LT FPS



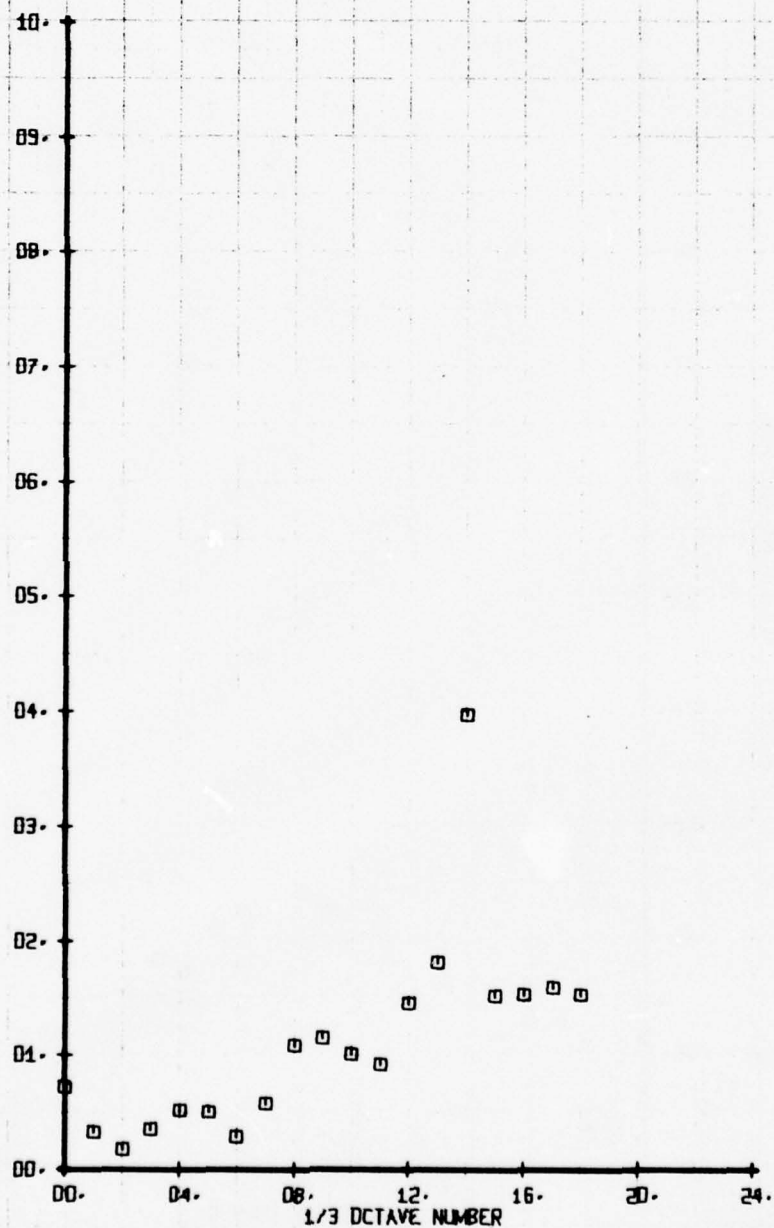
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE BEHIND STAB.
 RUN 115 TP 12

SYM
 □

CH
 72

LEGEND
 PARAMETER
 VEL-2LT

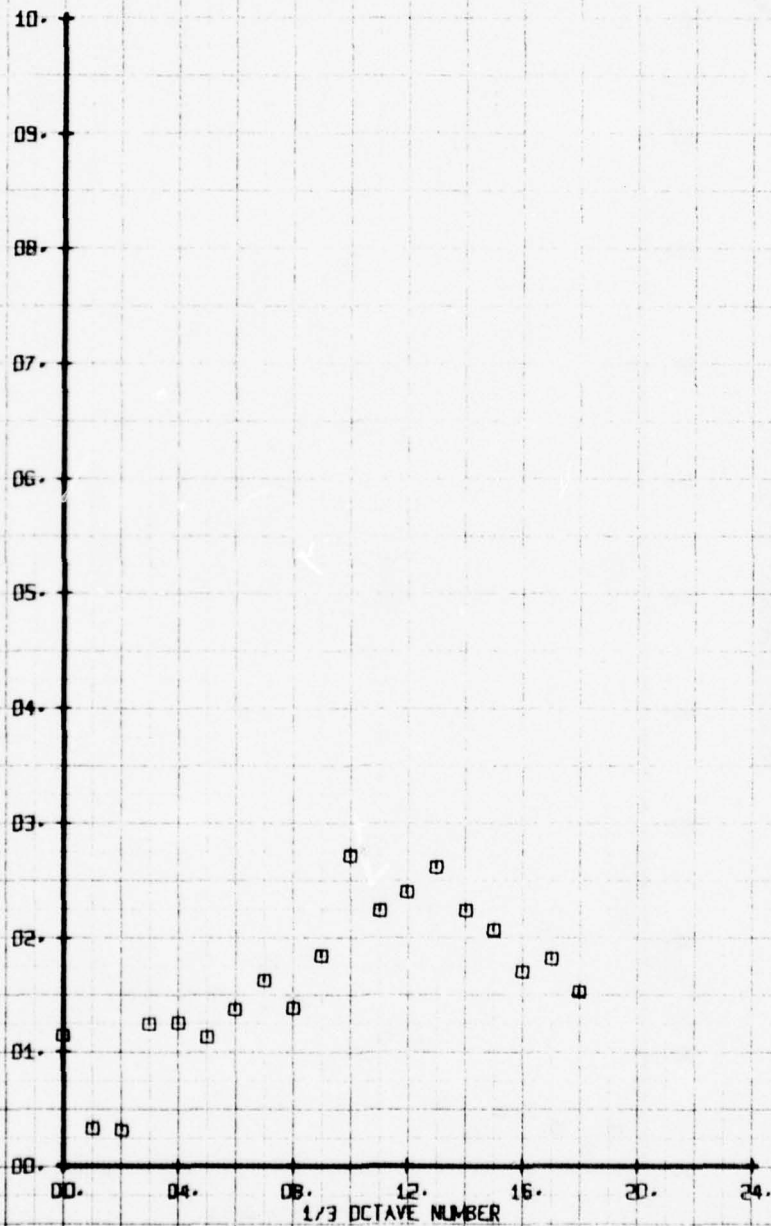
VELOCITY COMPONENT VEL-2LT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE BEHIND STAB.
RUN 115 TP 14

SYM	CH	LEGEND
□	72	PARAMETER VEL-2LT

VELOCITY COMPONENT VEL-2LT FPS

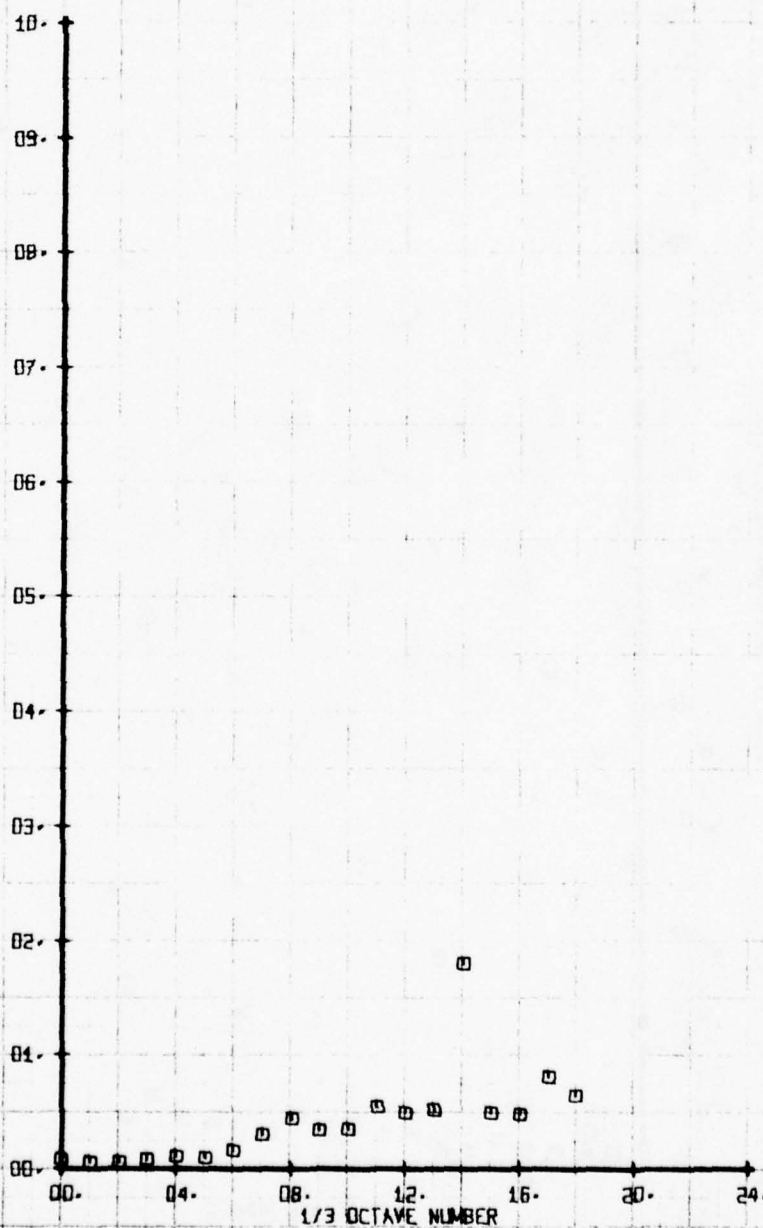


HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE BEHIND STAB.
RUN 115 TP 16

SYM
□

LEGEND
CH: 72
PARAMETER
VEL-2LT

VELOCITY COMPONENT VEL-2LT FPS



HDT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE BEHIND STAB.

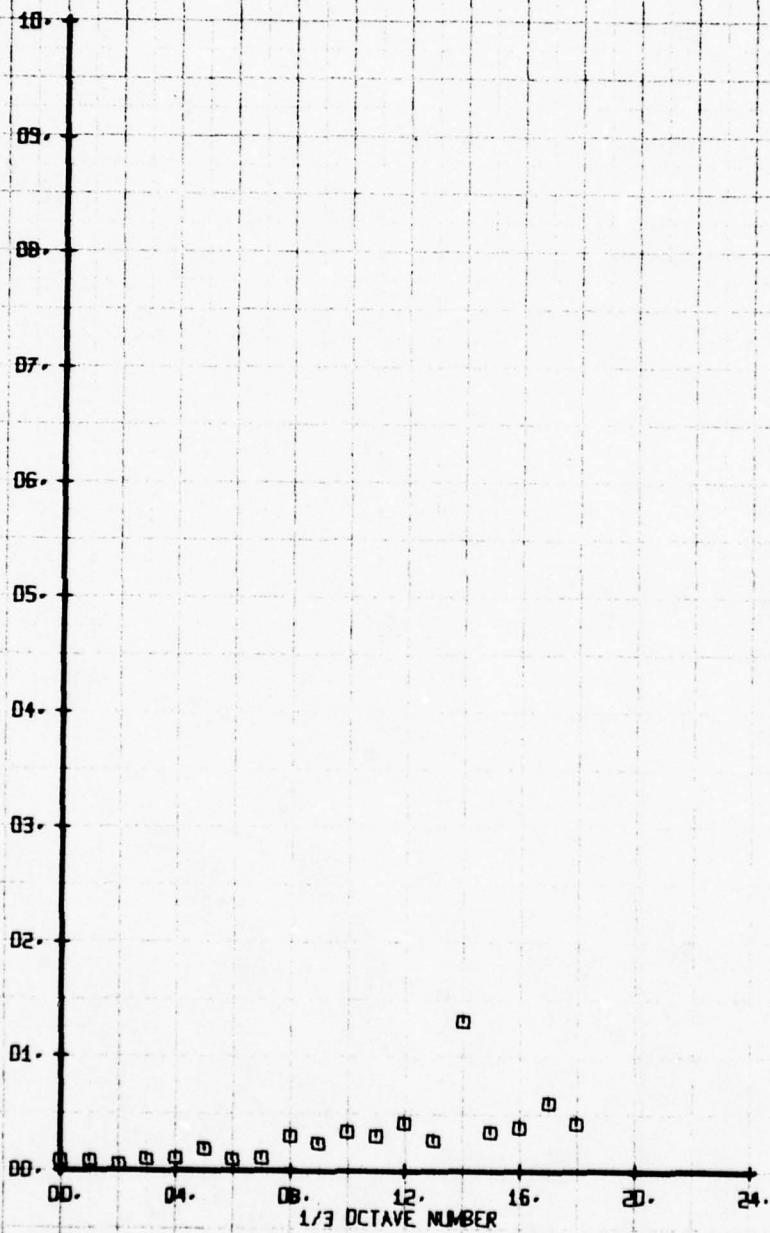
RUN 115 TP 18

SWM
 0

CH
 72

LEGEND
 PARAMETER
 VEL-2LT

VELOCITY COMPONENT VEL-2LT FPS



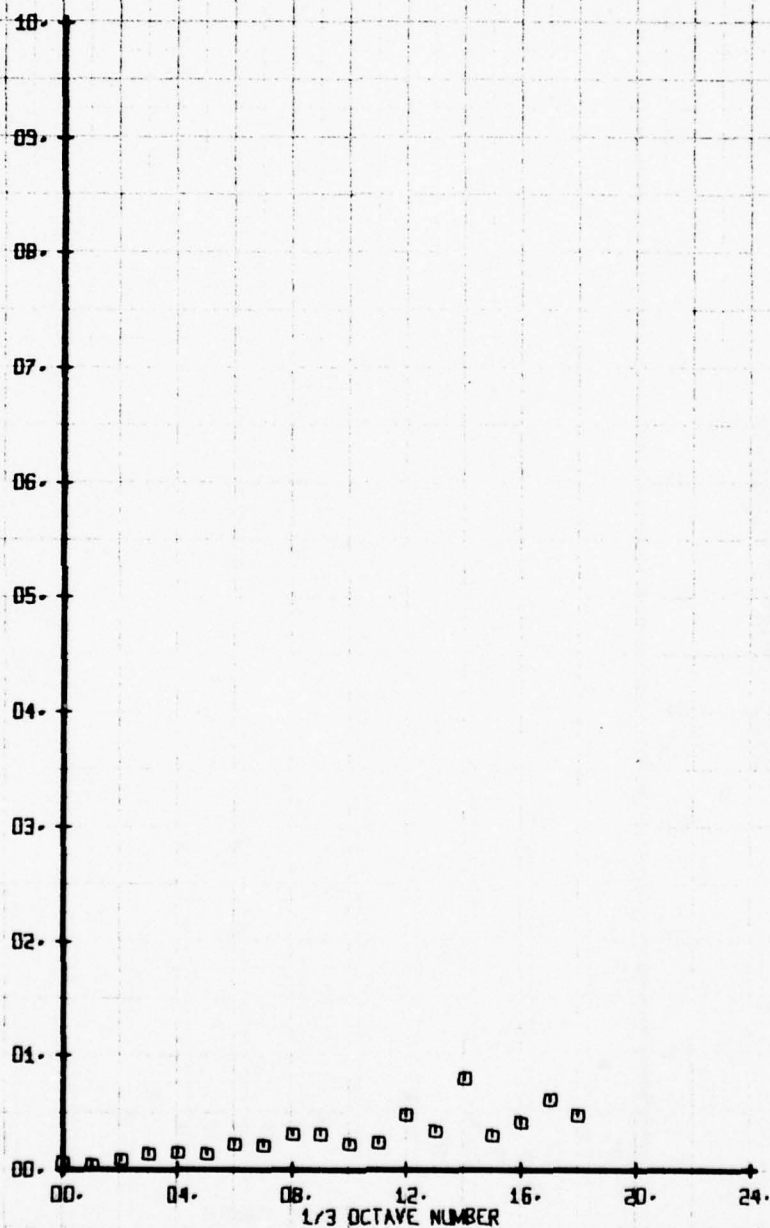
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE BEHIND STAB.
RUN 145 TP 20

SYM
0

CH
72

LEGEND
PARAMETER
VEL-2LT

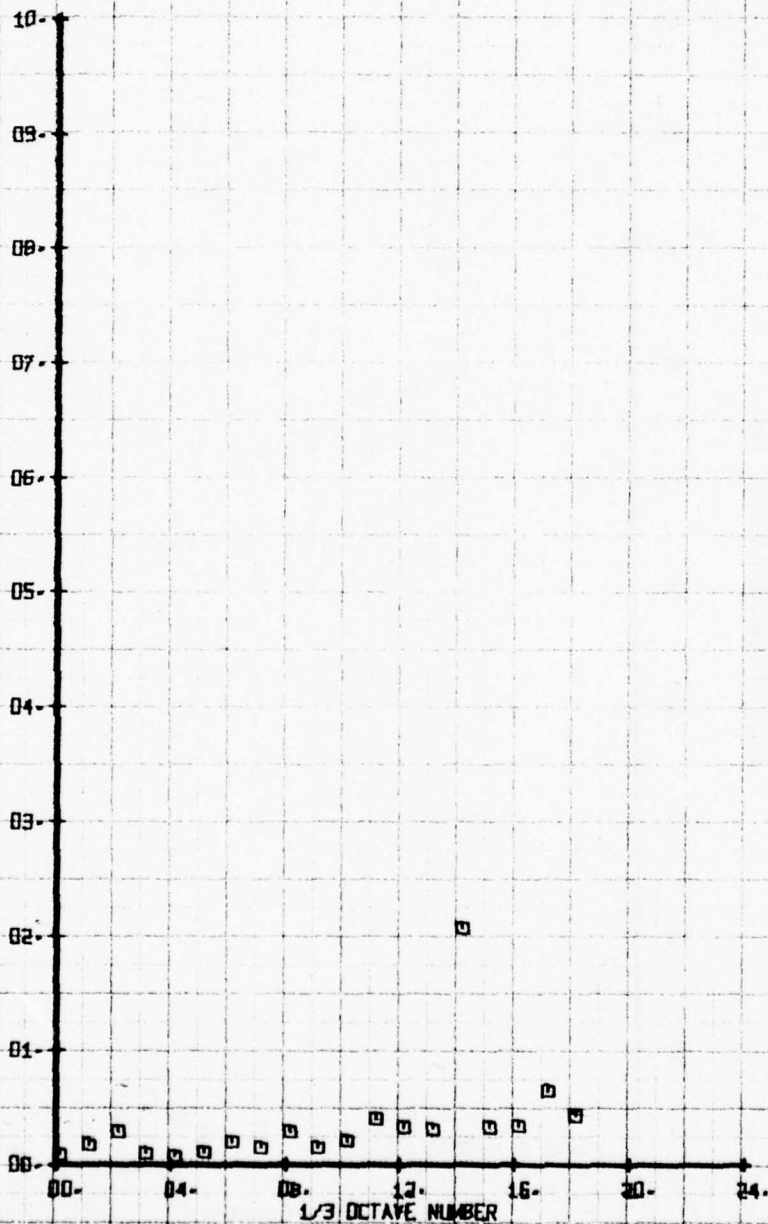
VELOCITY COMPONENT VEL-2LT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG: TRAVERSE BEHIND STAB.
 RUN 115 TP 3

LEGEND
 SYM CH PARAMETER
 □ 70 VEL-3LT

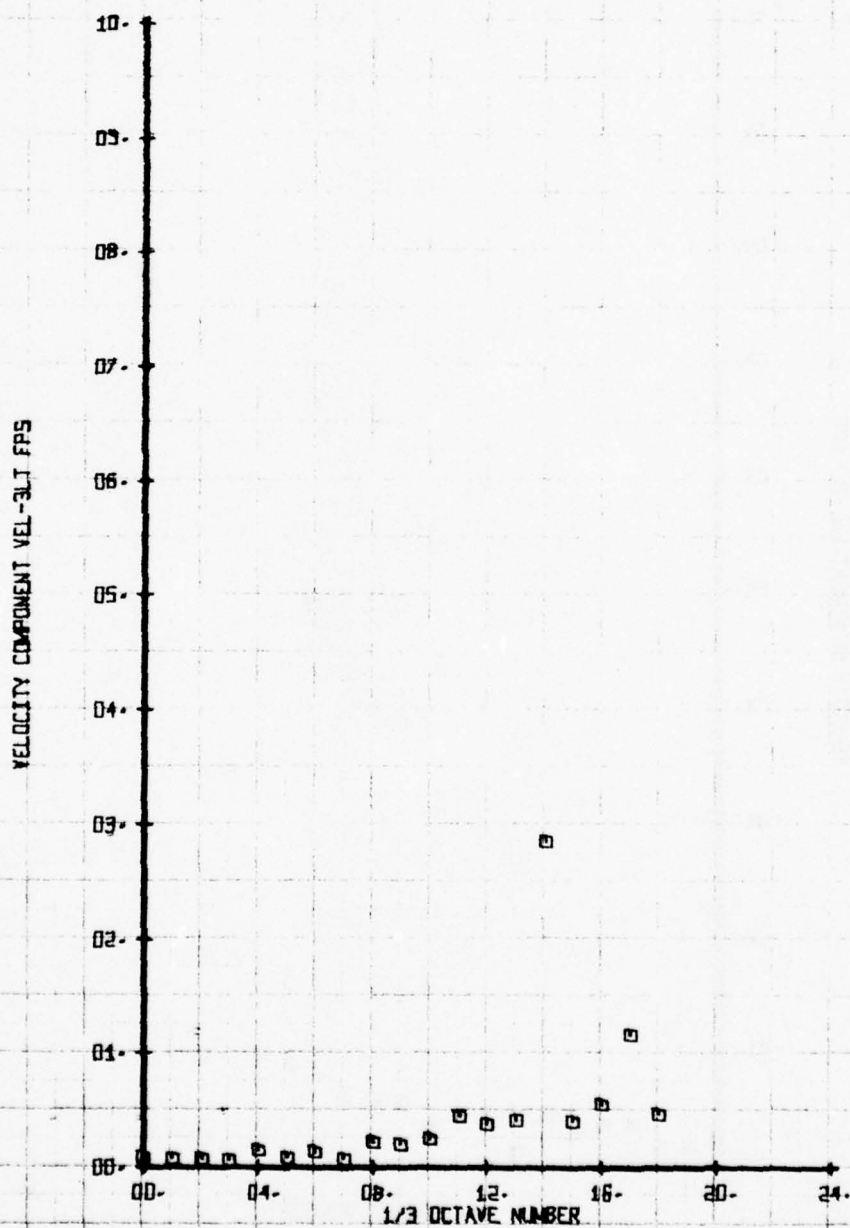
VELOCITY COMPONENT VEL-3LT FPS



JET 5
 WT 169

NOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE BEHIND STAB.
 RUN 115 TP 4

LEGEND
 SYM CH PARAMETER
 □ 70 VEL-3LT



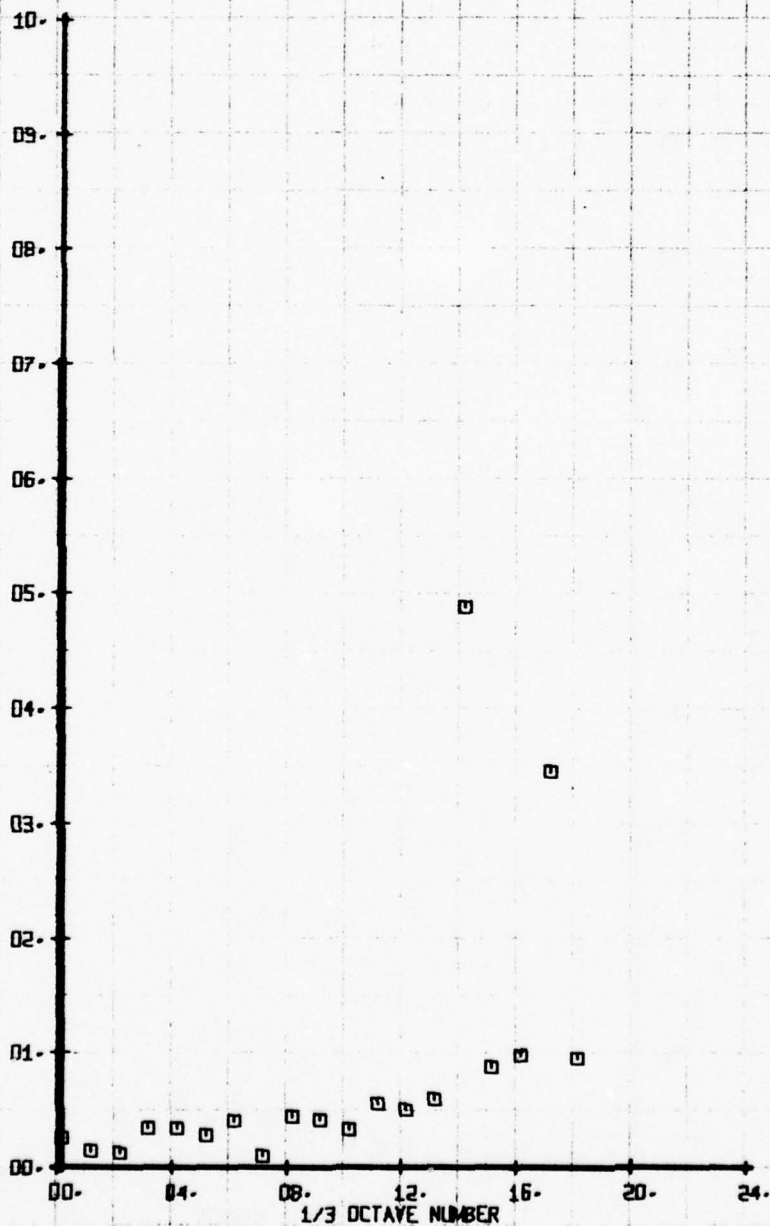
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE BEHIND STAB.
RUN 115 TP 6

SYM
□

CH
70

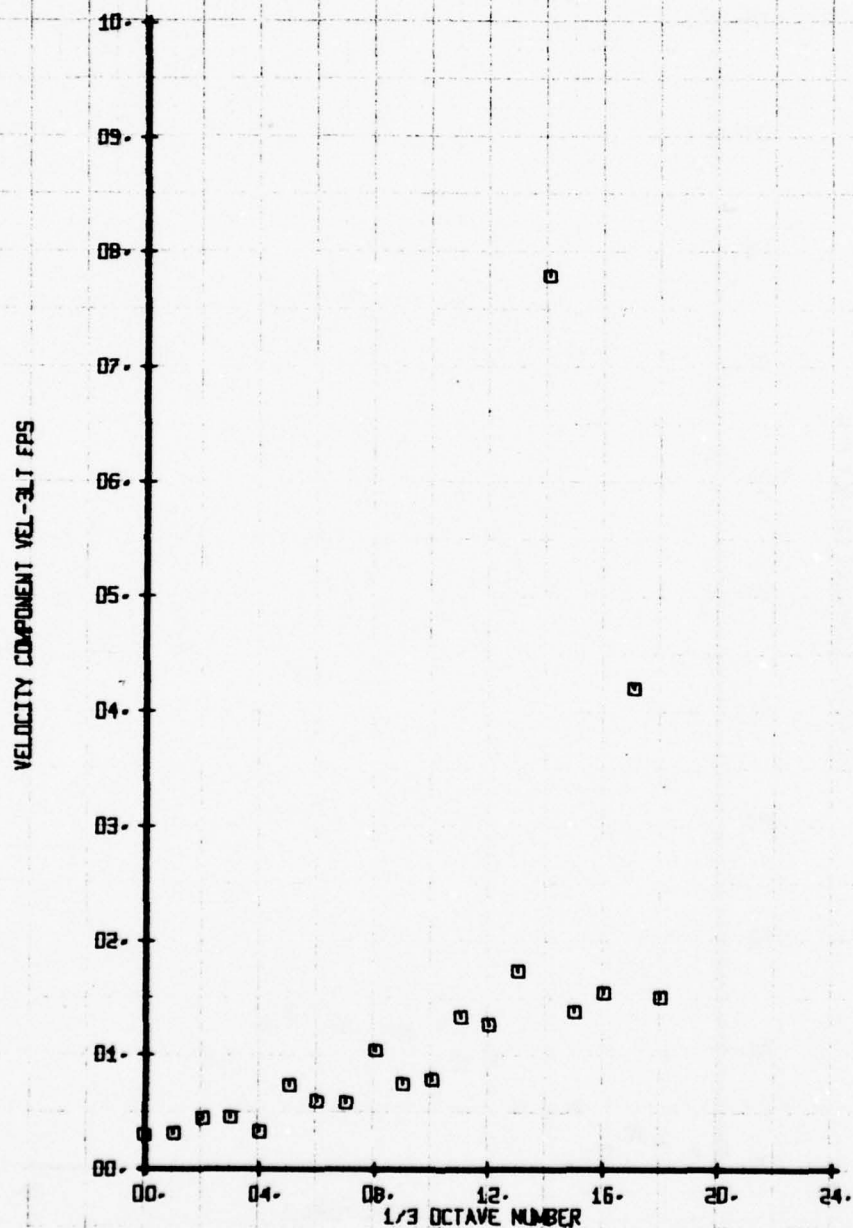
LEGEND
PARAMETER
VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS



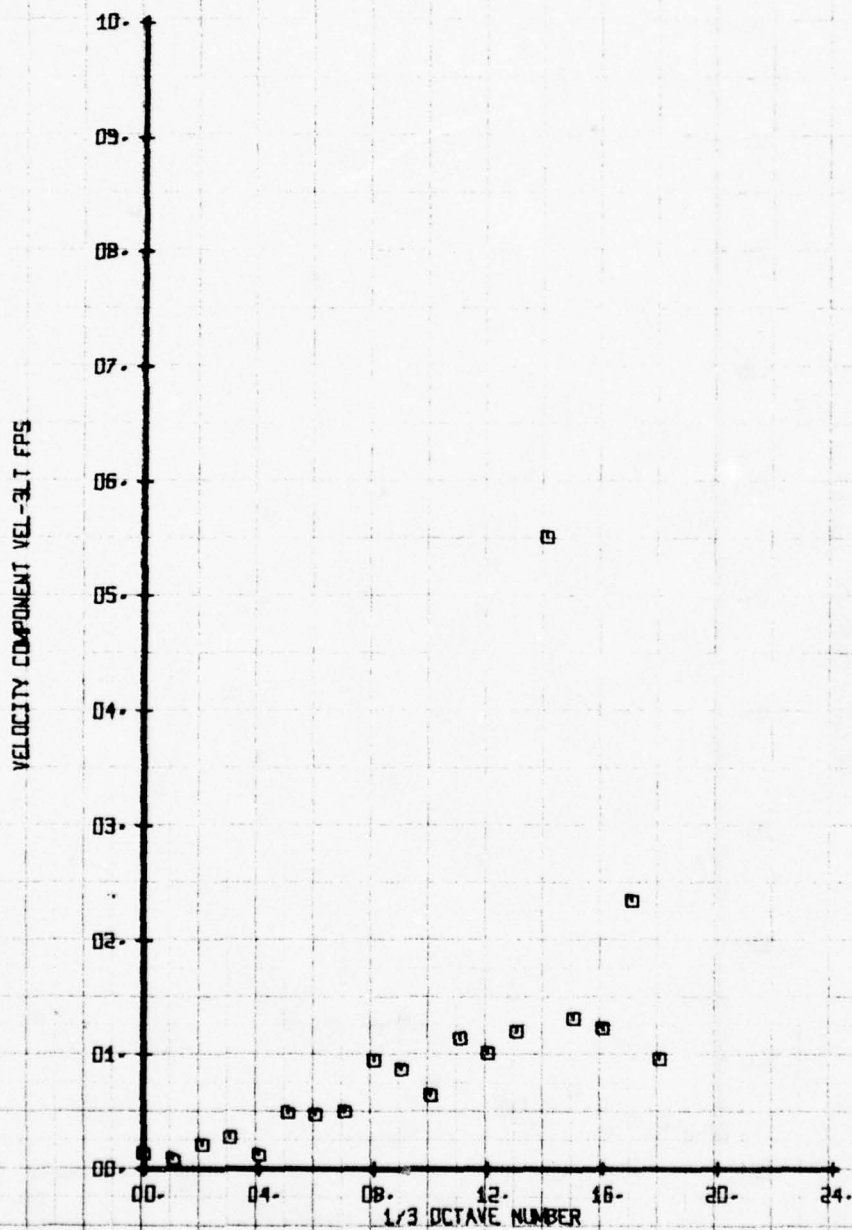
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG TRAVERSE BEHIND STAB.
 RUN 115 TP 9

SYN CH LEGEND
 0 70 PARAMETER
 VEL-3LT



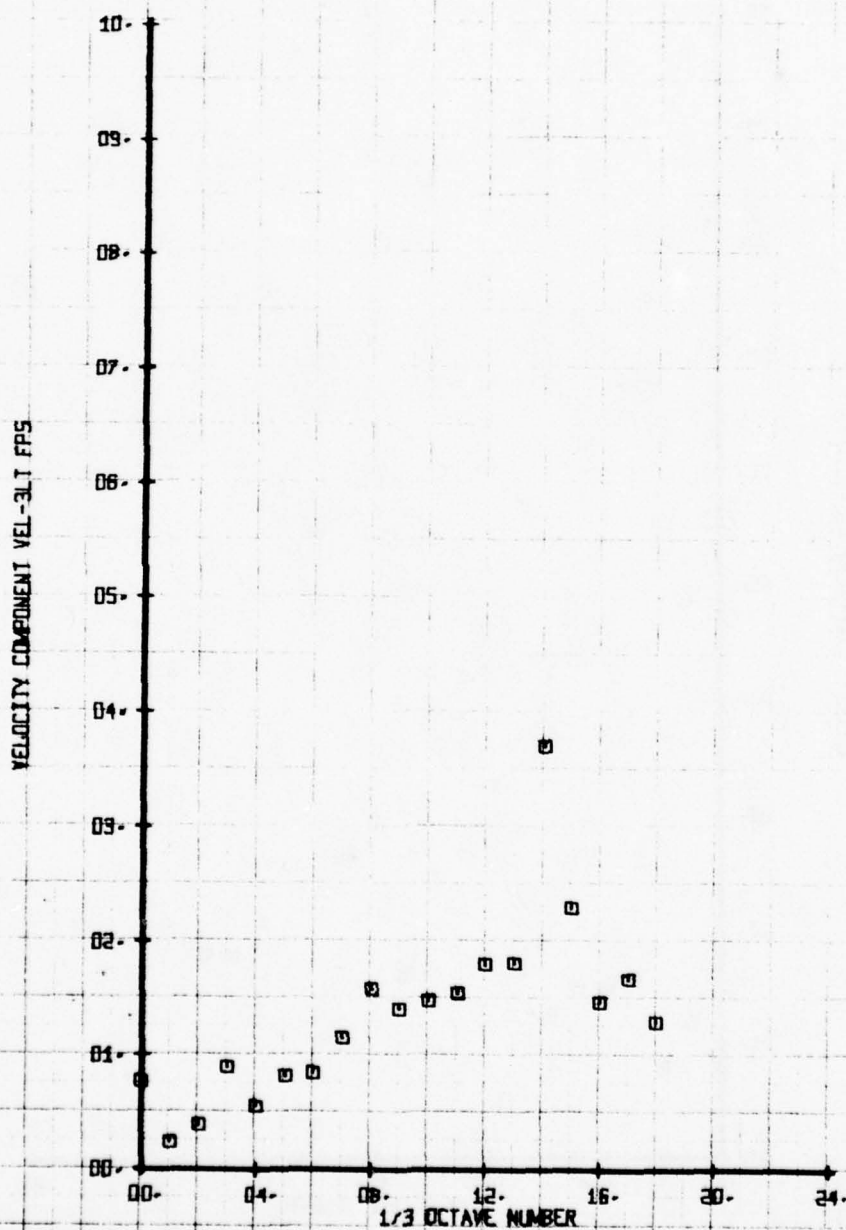
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE BEHIND STAB.
RUN 115 TP 10

LEGEND
SYM CH PARAMETER
□ 70 VEL-3LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG: TRAVERSE BEHIND STAB-
RUN 115 TP 12

LEGEND
SYM CH PARAMETER
□ 70 VEL-3LT



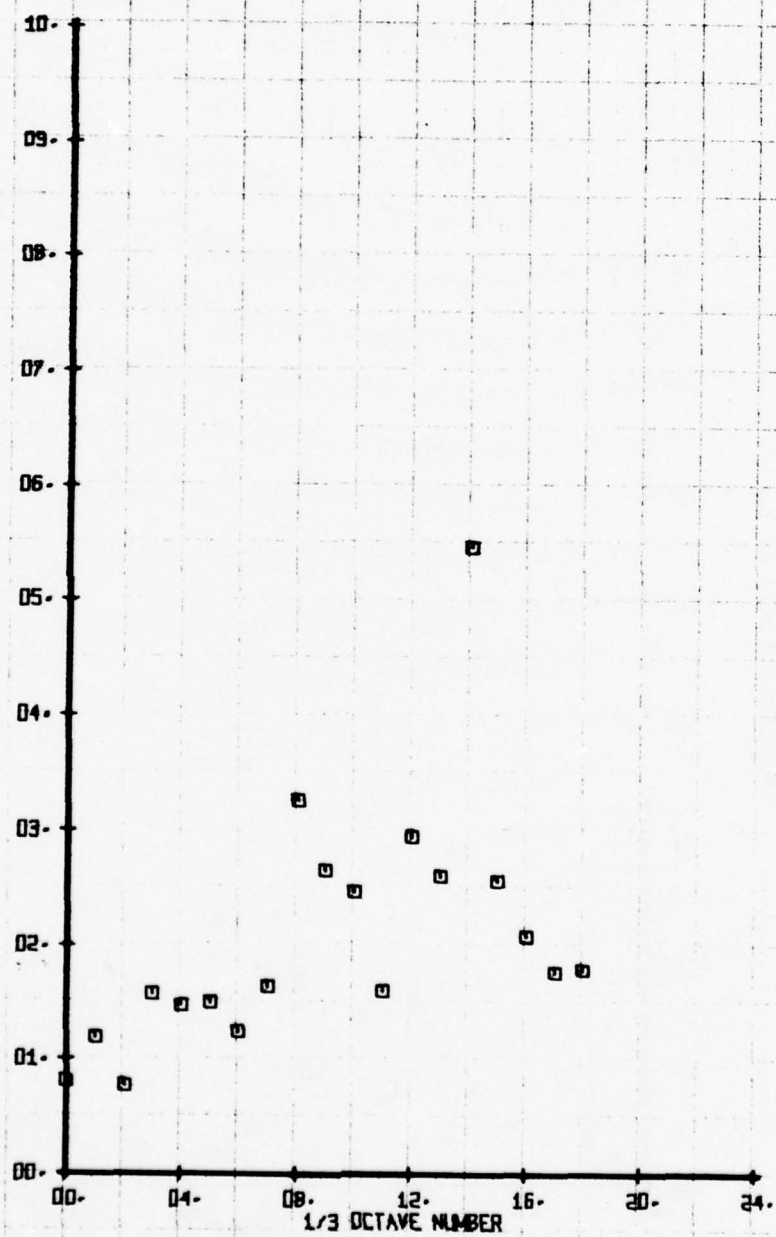
NOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG- TRAVERSE BEHIND STAB-
 RUN 115 TP 14

SYM
 □

CM
 70

LEGEND
 PARAMETER
 VEL-3LT

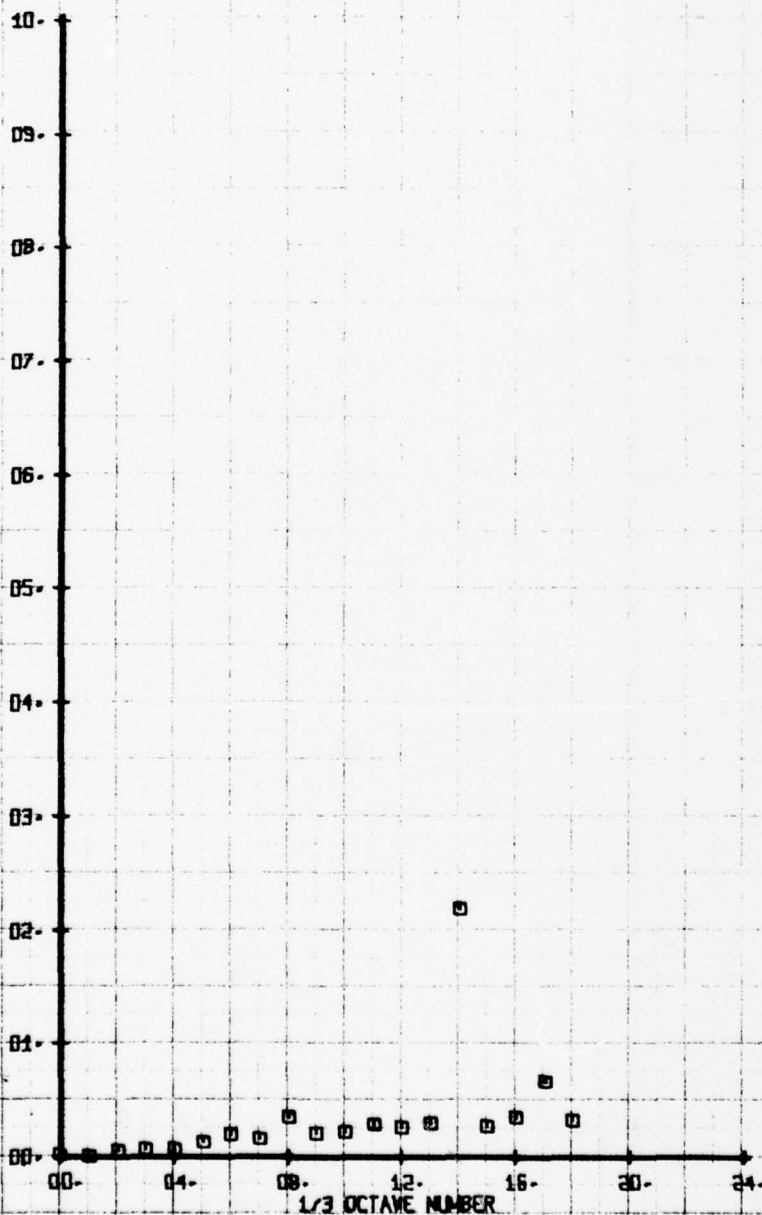
VELOCITY COMPONENT VEL-3LT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE BEHIND STAB-
 RUN 115 TP 16

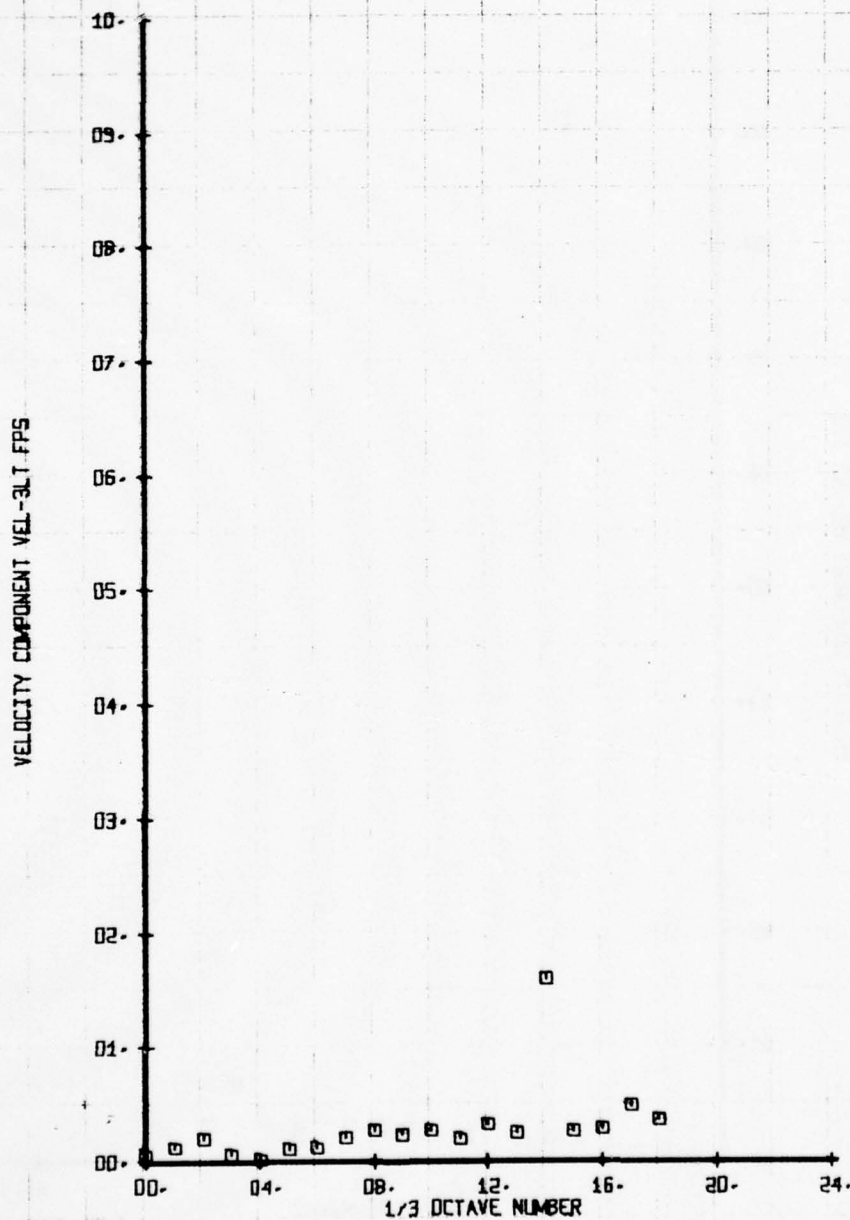
LEGEND
 SYM CH 7D PARAMETER
 □ VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE BEHIND STAB.
 RUN 115 TP 1B

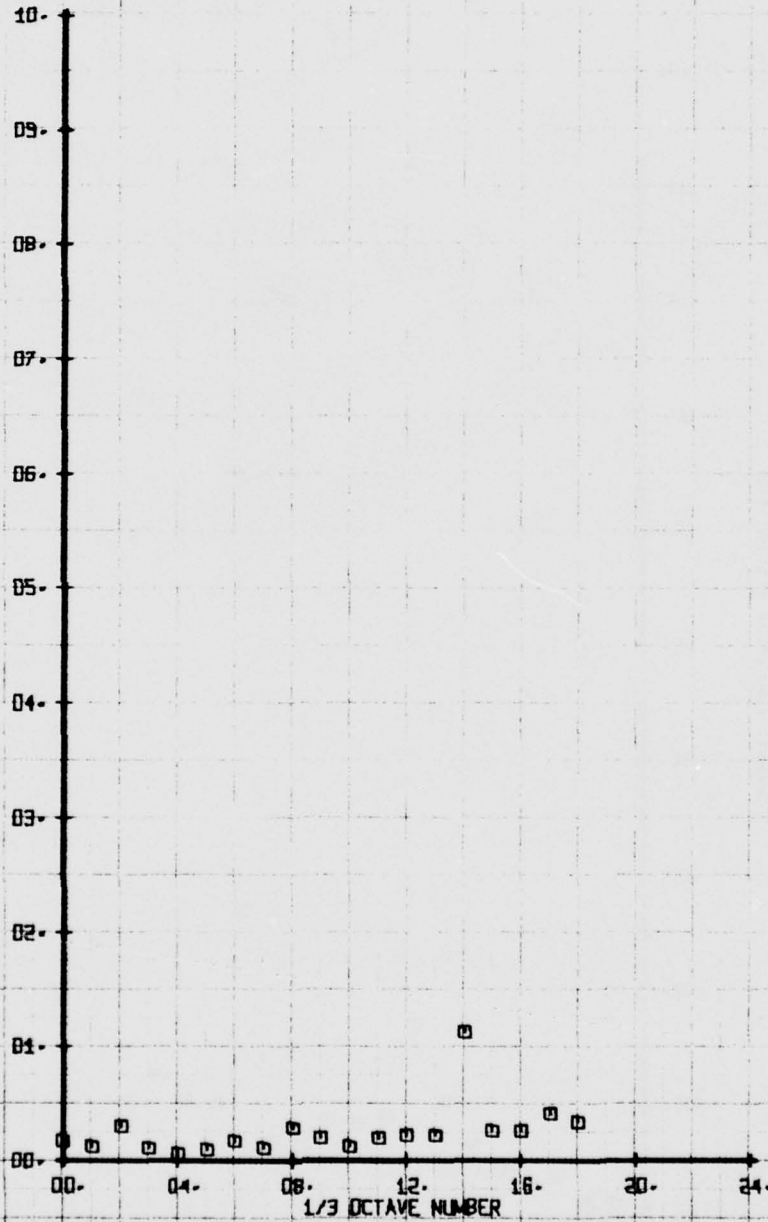
LEGEND
 SYM CH PARAMETER
 □ 70 VEL-3LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE BEHIND STAB.
 RUN 115 TP 20

LEGEND
 SYM CH PARAMETER
 □ 70 VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS

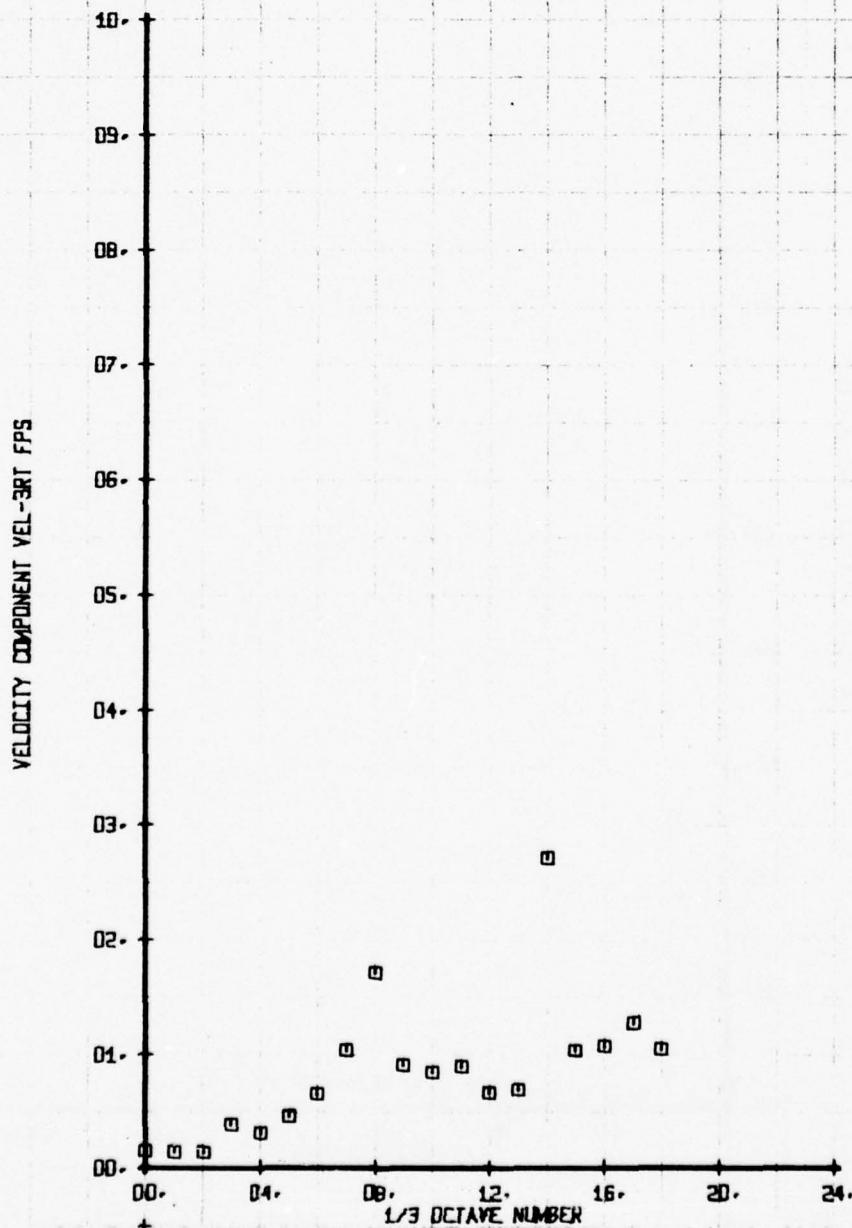


247

SET 5
 BWWT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE LEFT OF STAB.
 RUN 116 TP 7

SYM	CH	PARAMETER
□	71	VEL-3RT

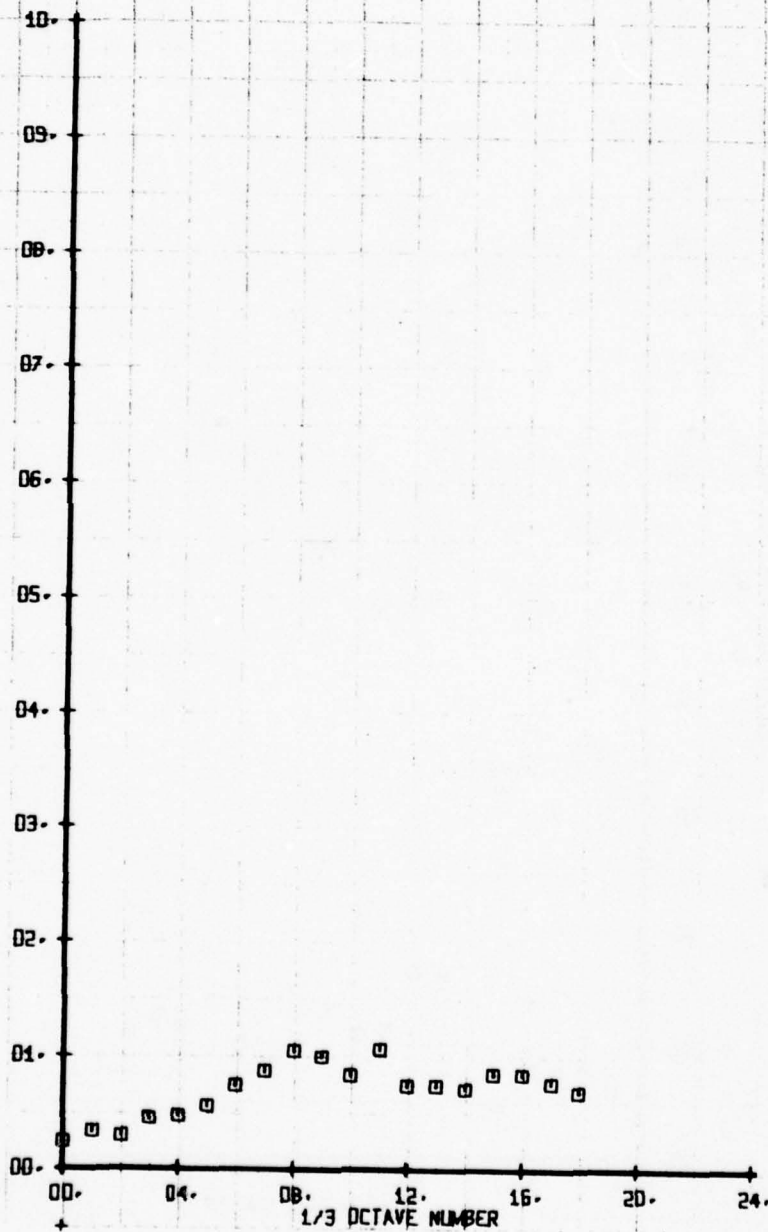


ET 6
 WT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE LEFT OF STAB.
 RUN 116 TP 7

SYM	CH	PARAMETER
□	75	VEL-2RT

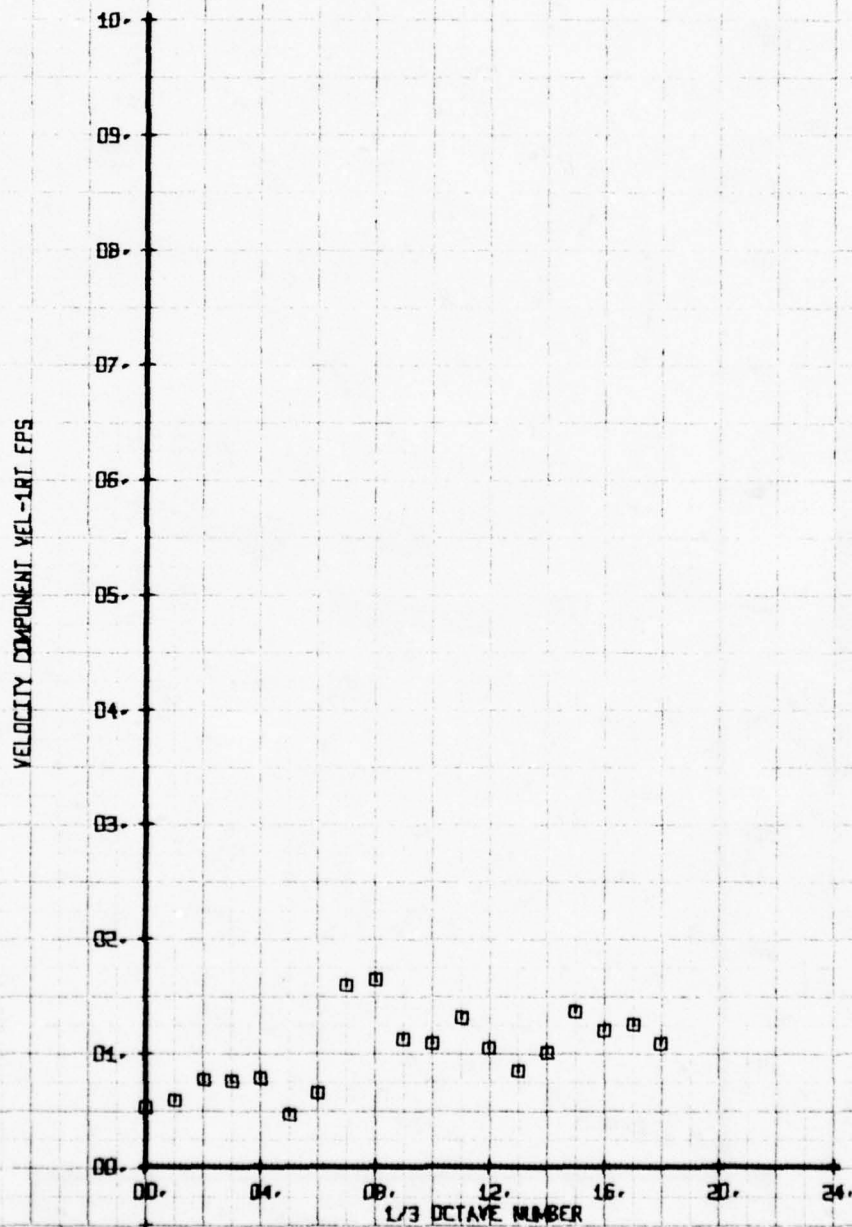
VELOCITY COMPONENT VEL-2RT FPS



ET 6 +
 WT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE LEFT OF STAB.
 RUN 116 TP 7

LEGEND
 SYM CH. PARAMETER
 □ 74 VEL-1RT



ET 6
 WT 169

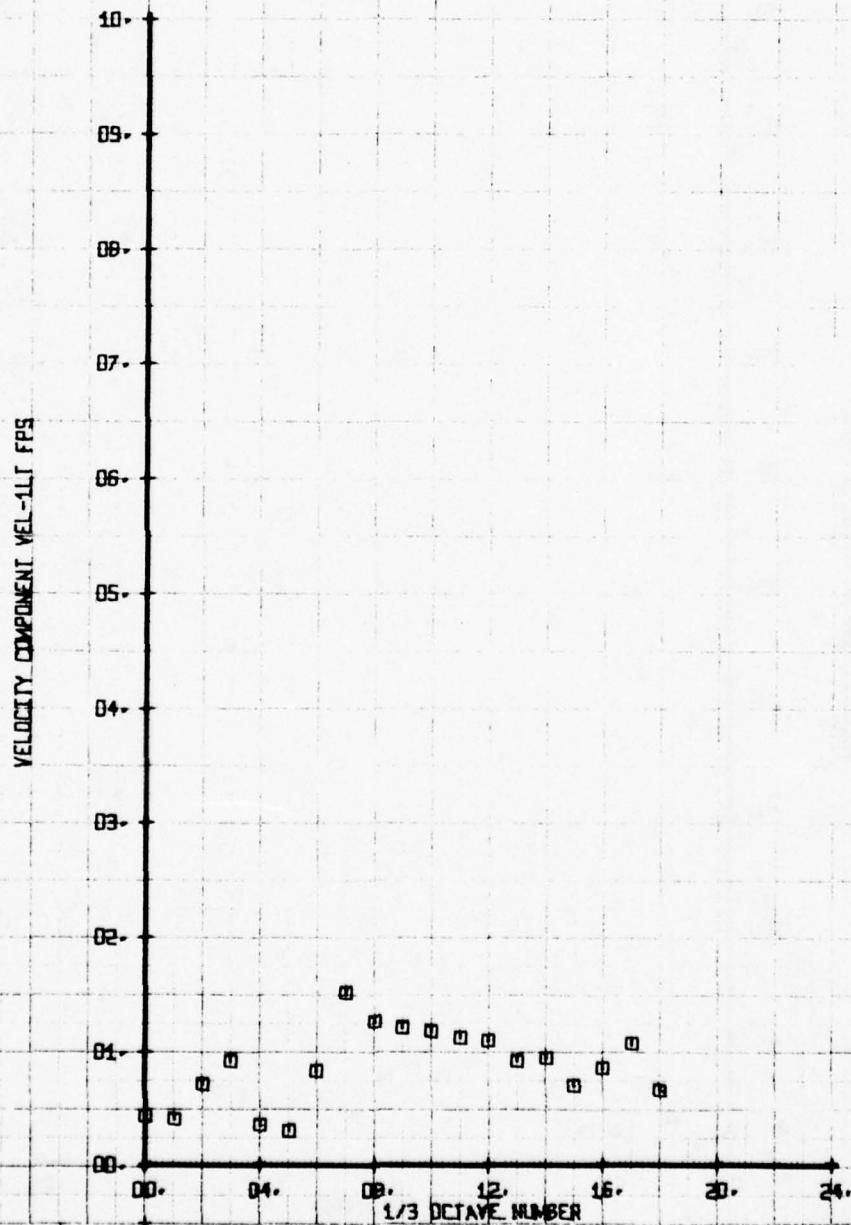
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG, TRAVERSE LEFT OF STAB.
 RUN 116 TP 7

SYM
 □

CH
 73

LEGEND

PARAMETER
 VEL-1LT



ET 6
 WT 169

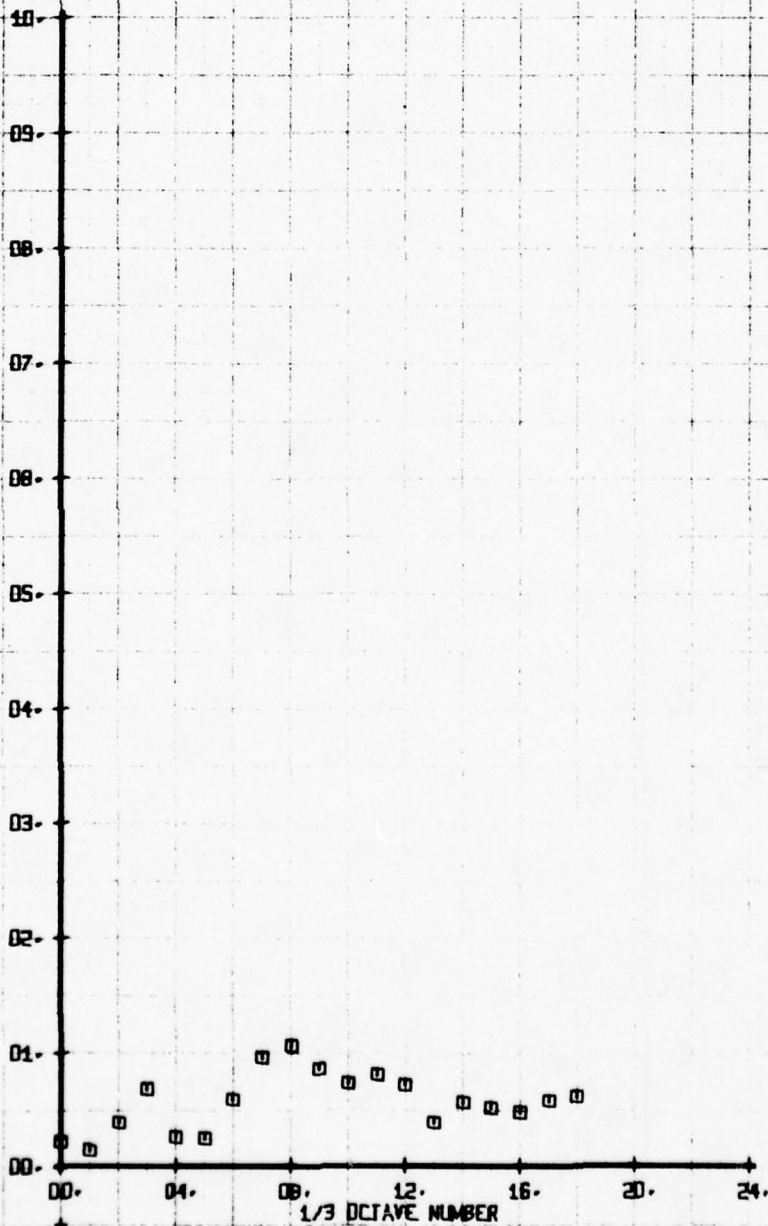
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE LEFT OF STAB.
 RUN 116 TP 7

SYM
 0

CH
 72

LEGEND
 PARAMETER
 VEL-2LT

VELOCITY COMPONENT VEL-2LT FPS



ET 6
 WT 169

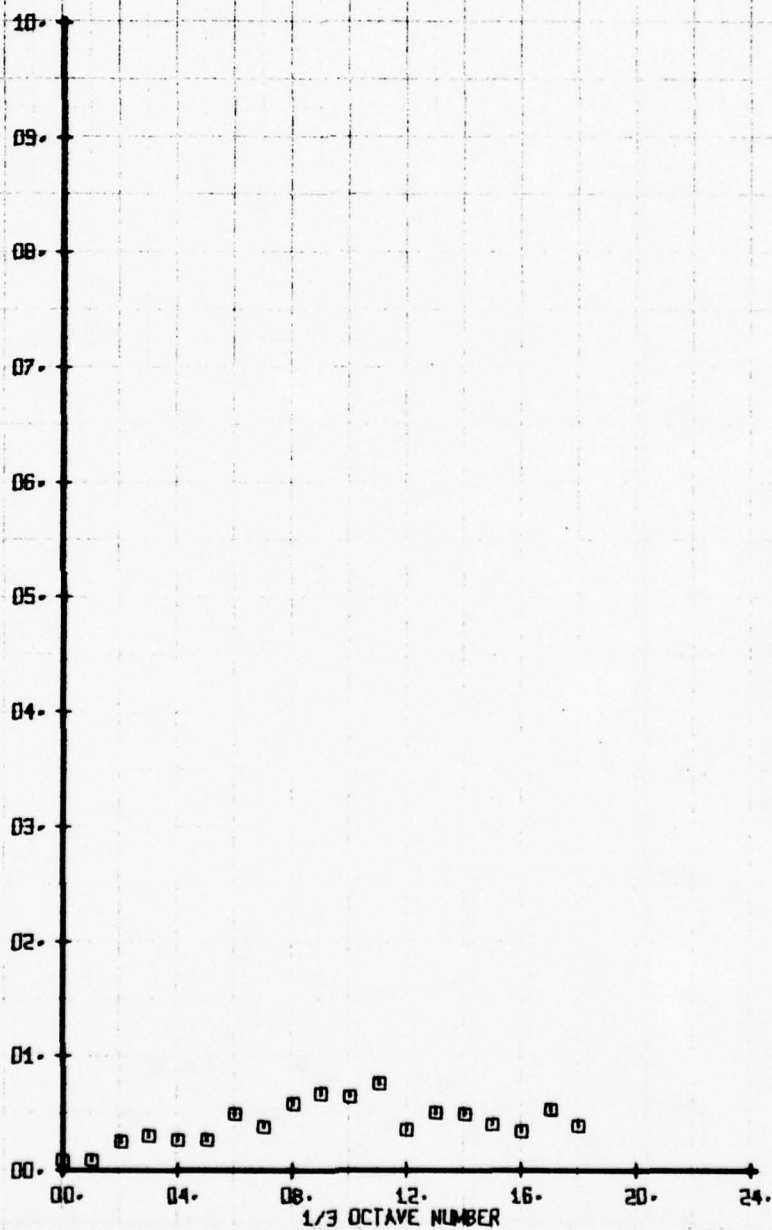
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE LEFT OF STAB.
 RUN 116 TP 7

SYM
 0

CH
 70

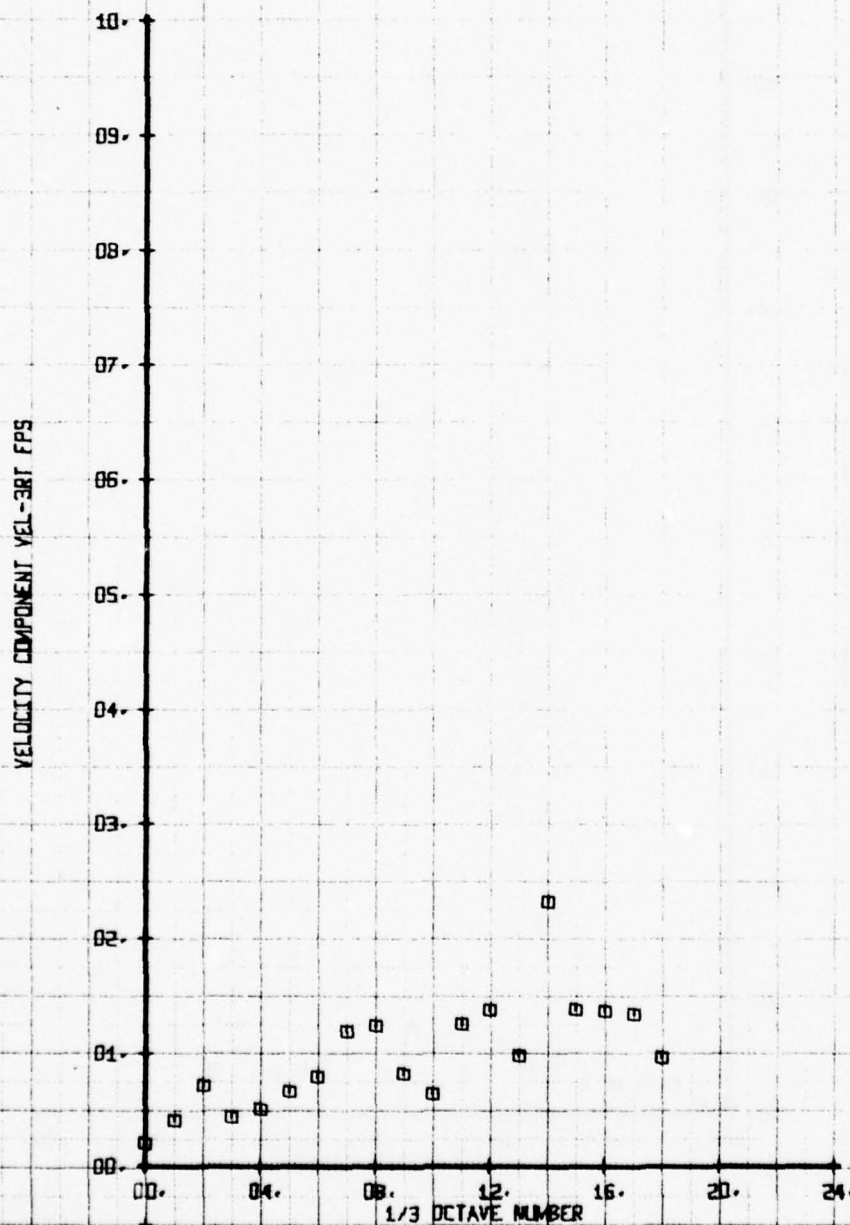
LEGEND
 PARAMETER
 VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE LEFT OF STAB.
 RUN 117 TP 2

SYN CH LEGEND
 0 71 PARAMETER
 VEL-3RT



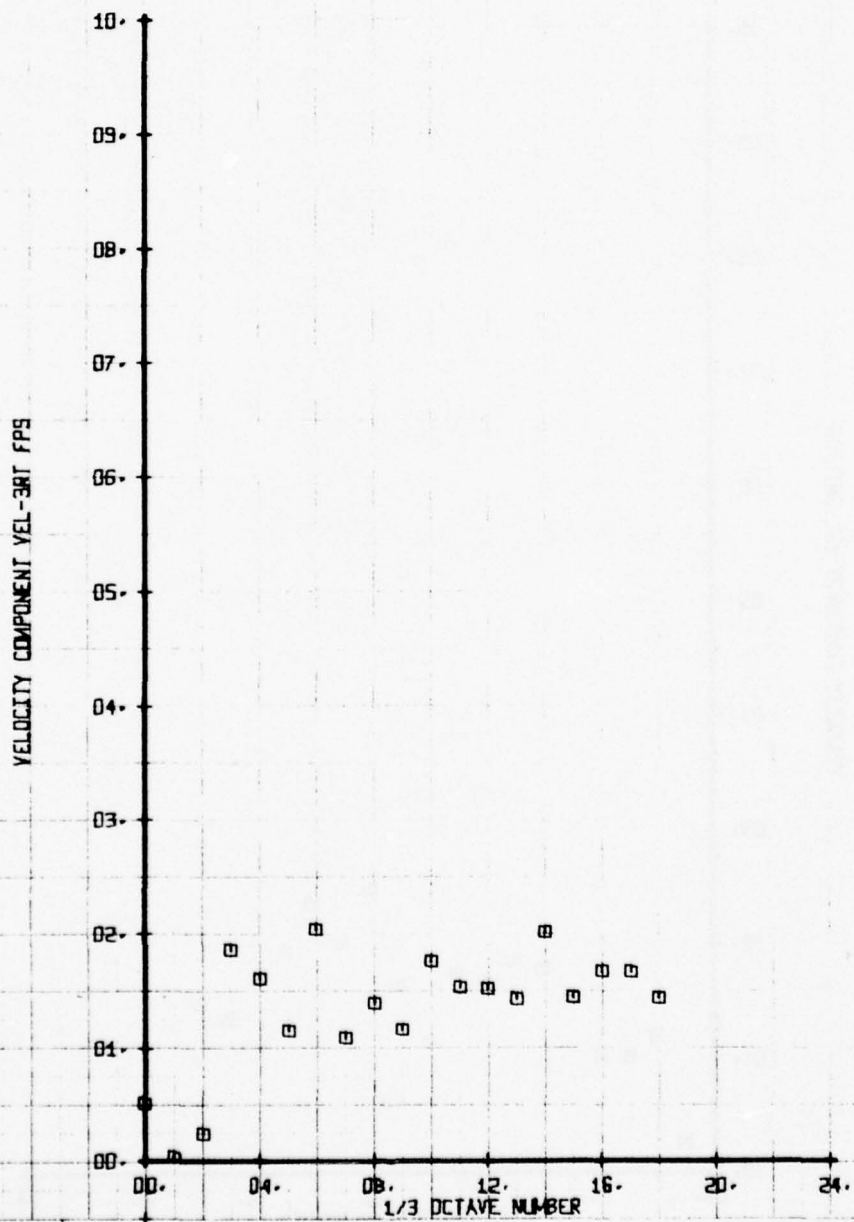
ET 7
 WT 169

254

SET 7
 BWWT 169

NOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE LEFT OF STAB.
 RUN 117 TP 4

LEGEND
 SYM CH PARAMETER
 □ 71 VEL-3RT

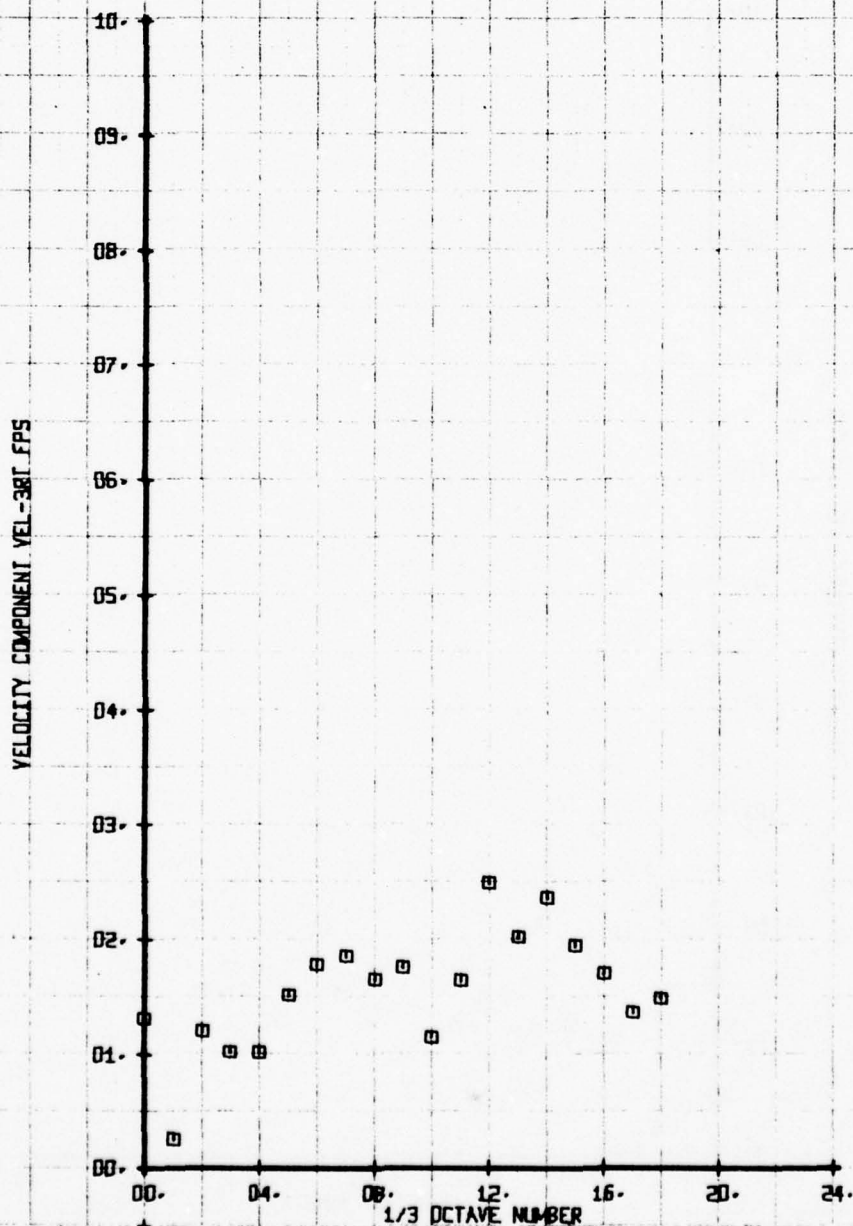


ET 7
 WT 169

255

NOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE LEFT OF STAB.
 RUN 117 TP 6

SYM CH PARAMETER
 □ 71 VEL-3RT

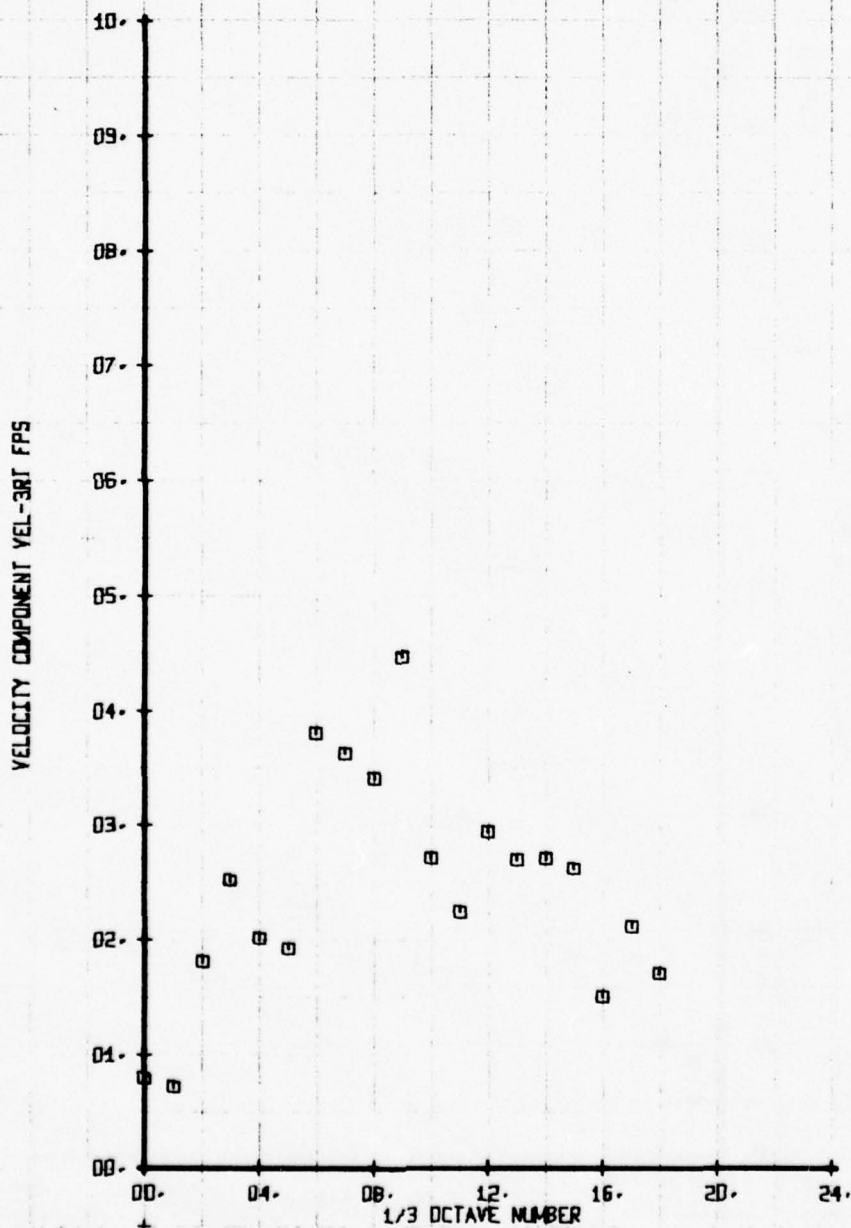


HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE LEFT OF STAB.
 RUN 117 TP B

SYM
 □

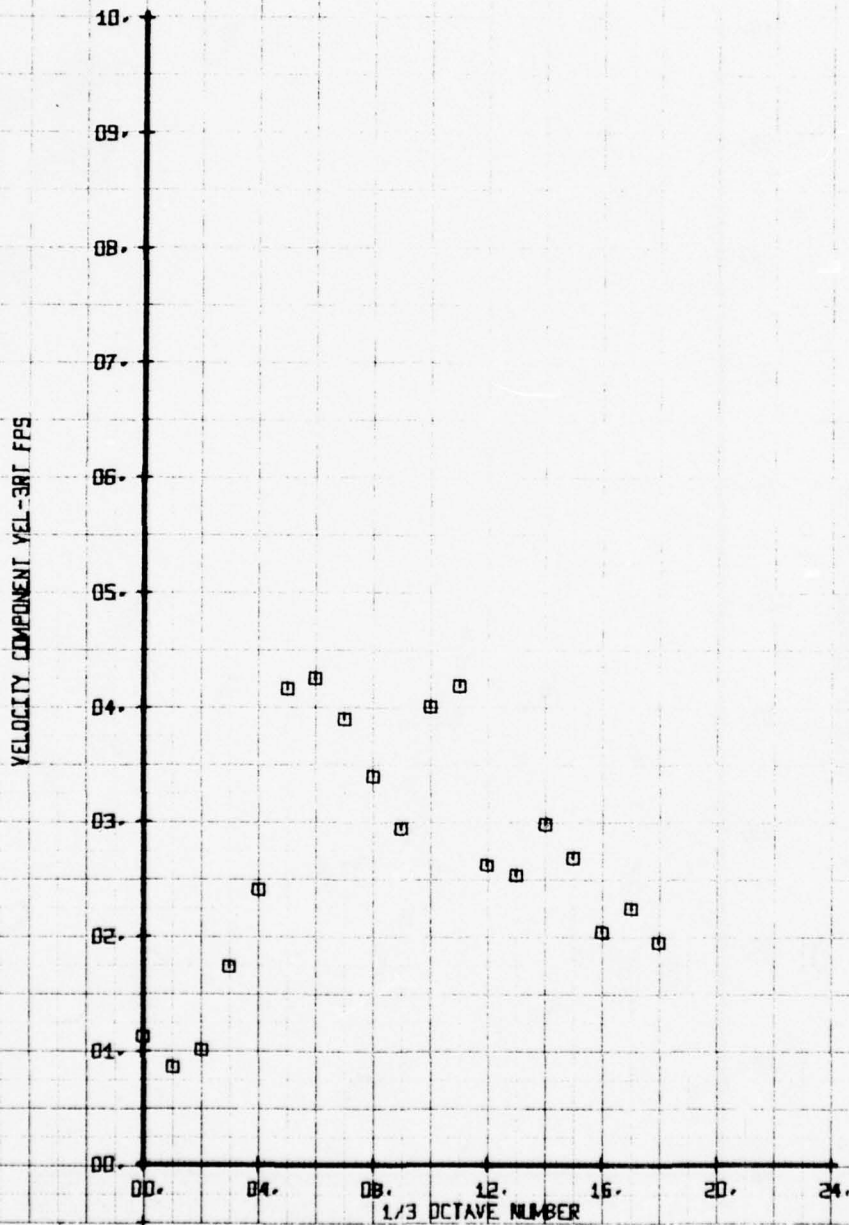
CH
 71

LEGEND
 PARAMETER
 VEL-3RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE LEFT OF STAB.
RUN 117 TP 10

SYN CH PARAMETER
□ 71 VEL-3RT

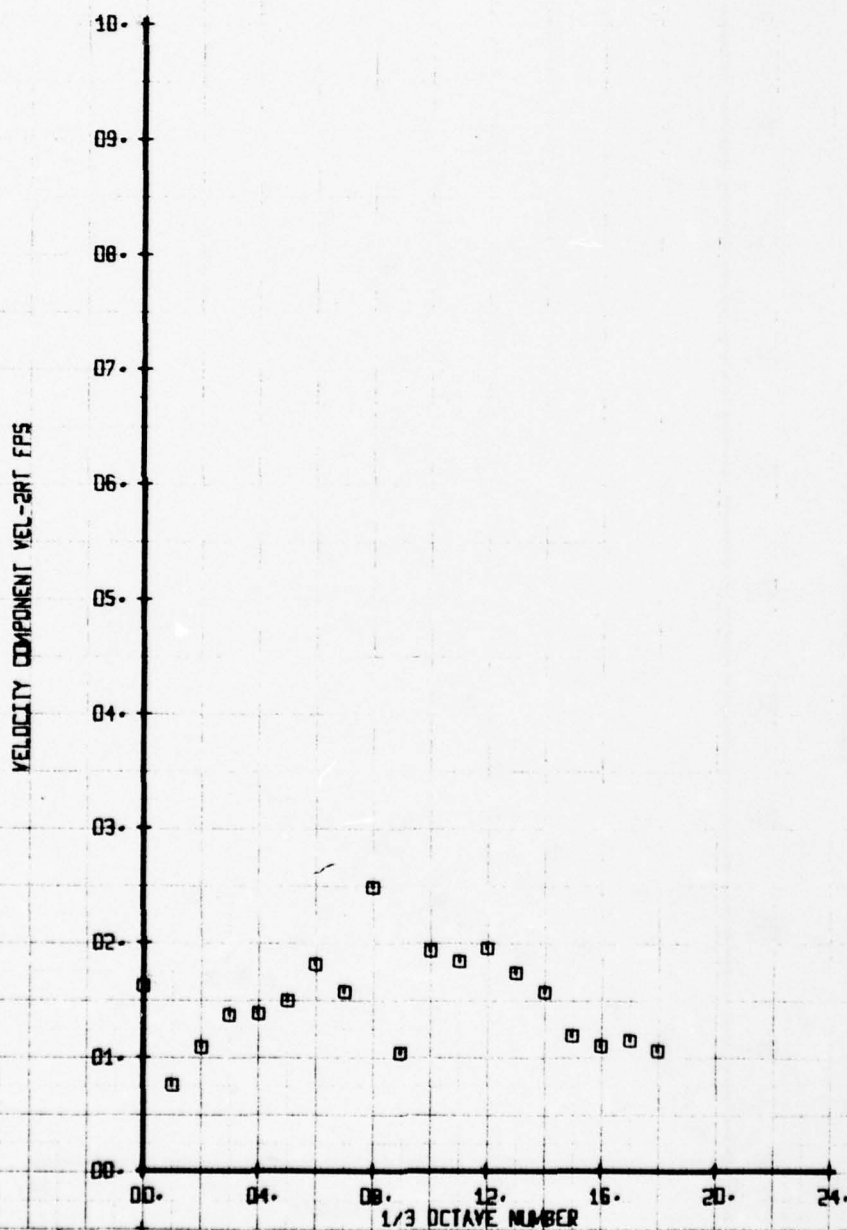


258

SET 7
BVWT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE LEFT OF STAB.
 RUN 117 TP 2

LEGEND
 SYM CH PARAMETER
 □ 75 VEL-2RT



ET 7
 WT 169

259

SET 7
 BVWT 169

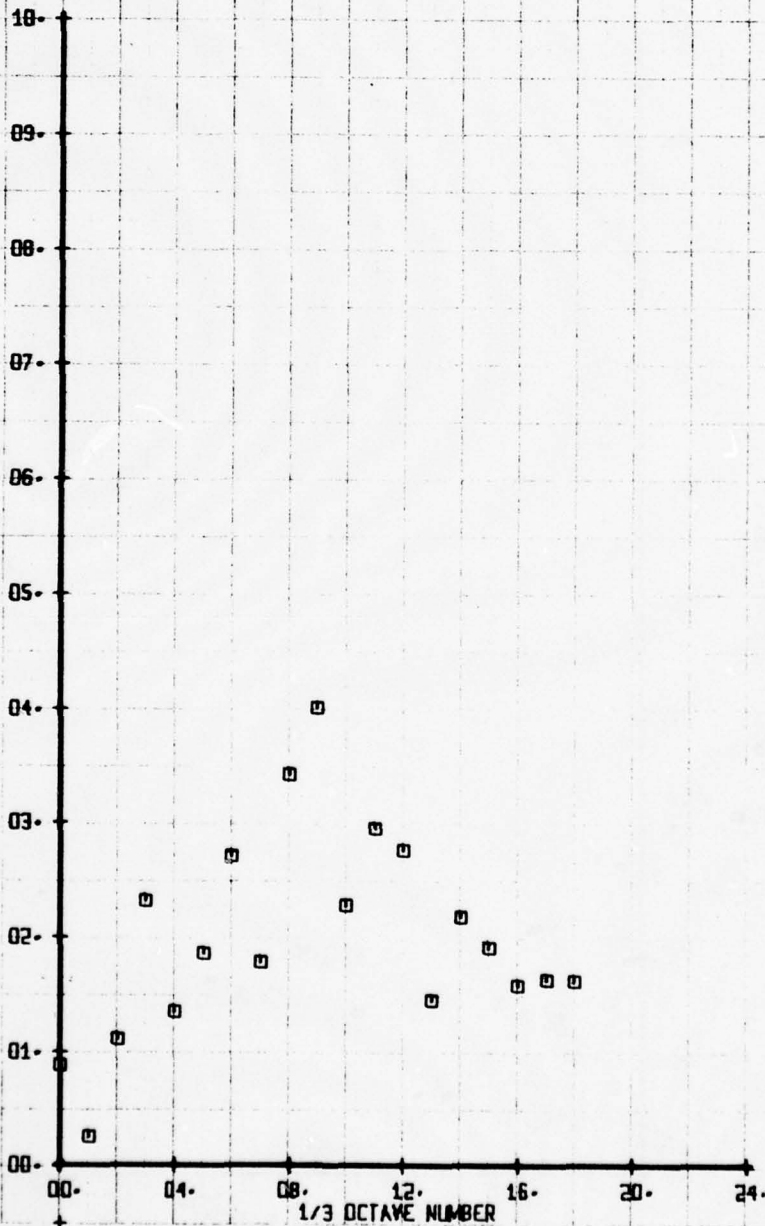
HON FILM WARE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE LEFT OF STAB.
 RUN 117 TP 4

SYM
 □

CH
 75

LEGEND
 PARAMETER
 VEL-2RT

VELOCITY COMPONENT VEL-2RT FPS



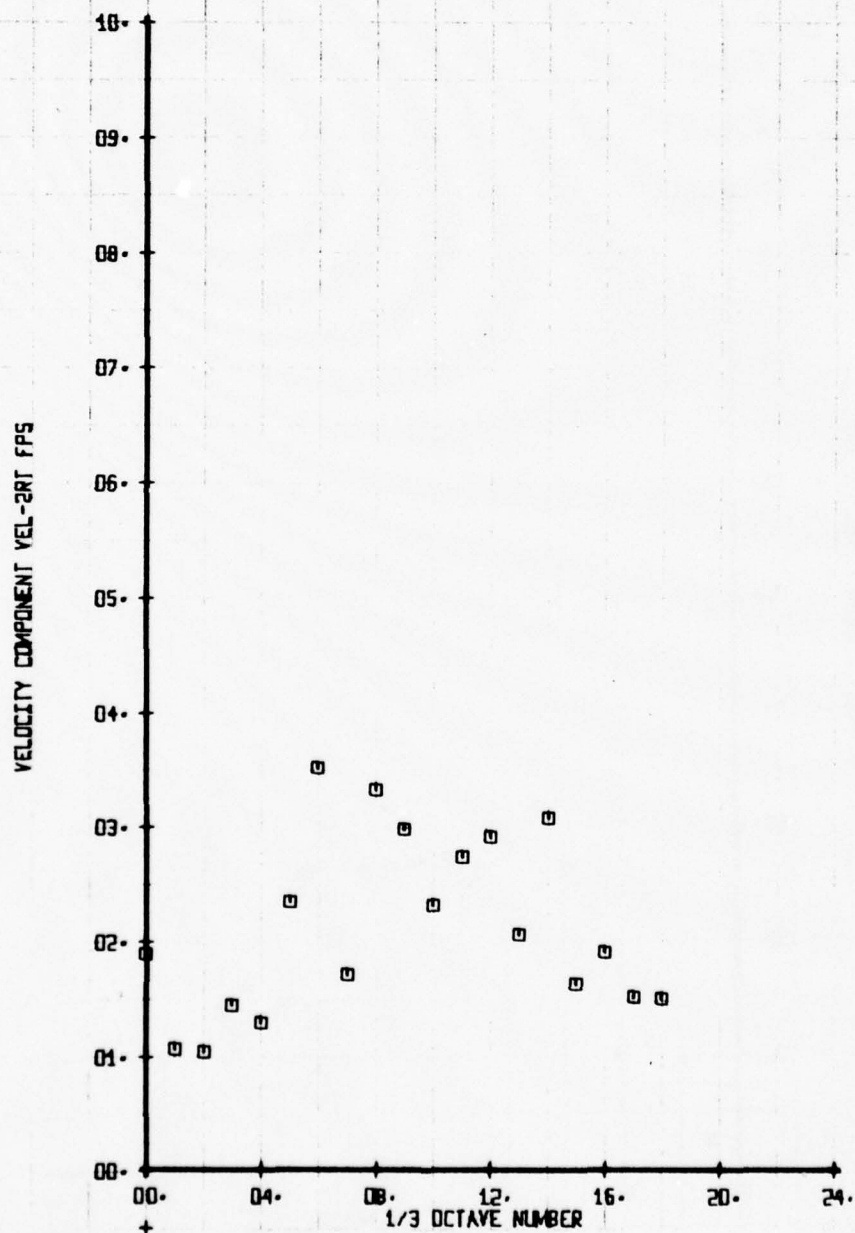
ET 7
 WT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE LEFT OF STAB.
 RUN 117 TP 6

SYM
 □

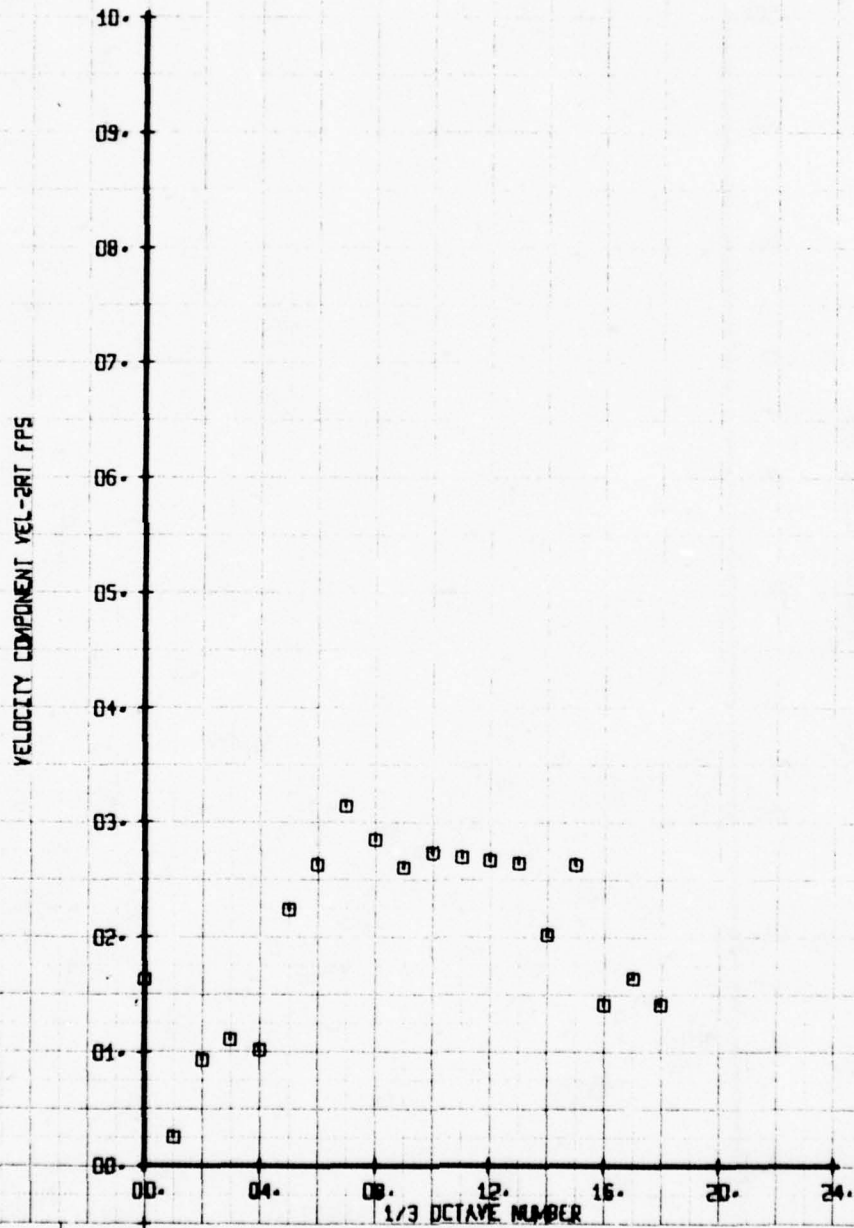
CH
 75

LEGEND
 PARAMETER
 VEL-2RT



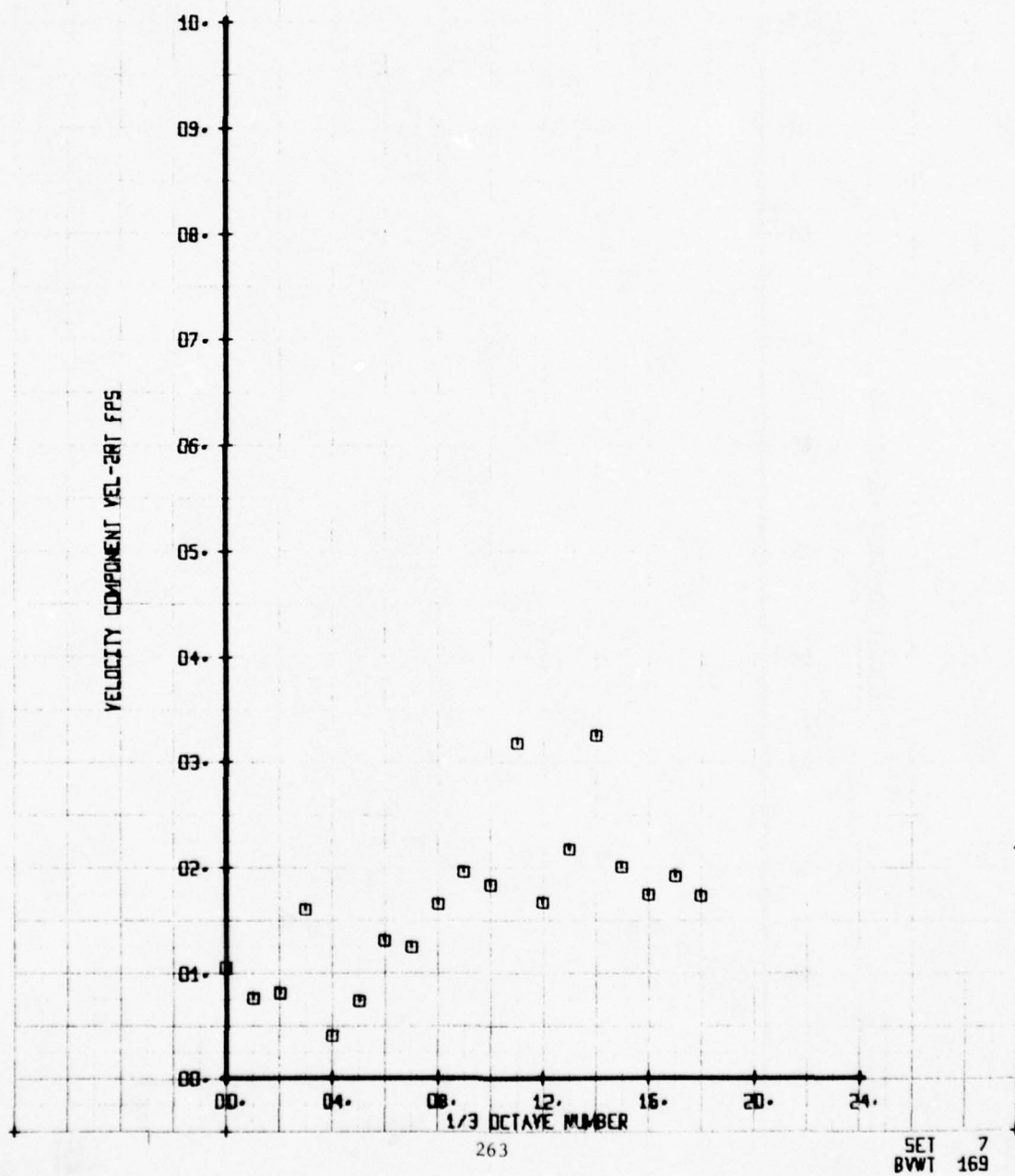
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE LEFT OF STAB.
RUN 117 TP 8

LEGEND
SYM CH PARAMETER
□ 75 VEL-2RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE LEFT OF STAB.
 RUN 117 TP 10

LEGEND
 SYM CH PARAMETER
 □ 75 VEL-2RT



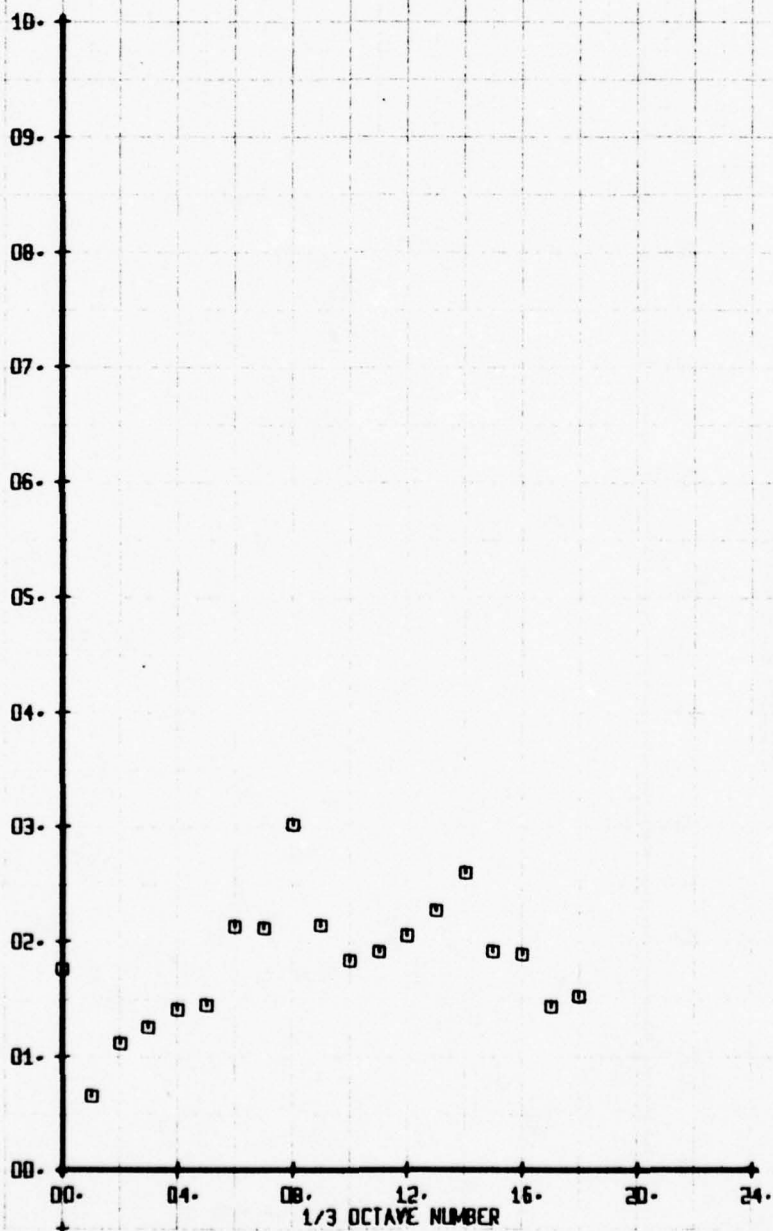
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE LEFT OF STAB.
 RUN 117 TP 2

SYM
 □

CH
 74

LEGEND
 PARAMETER
 VEL-1RT

VELOCITY COMPONENT VEL-1RT FPS



ET 7
 WT 169

264

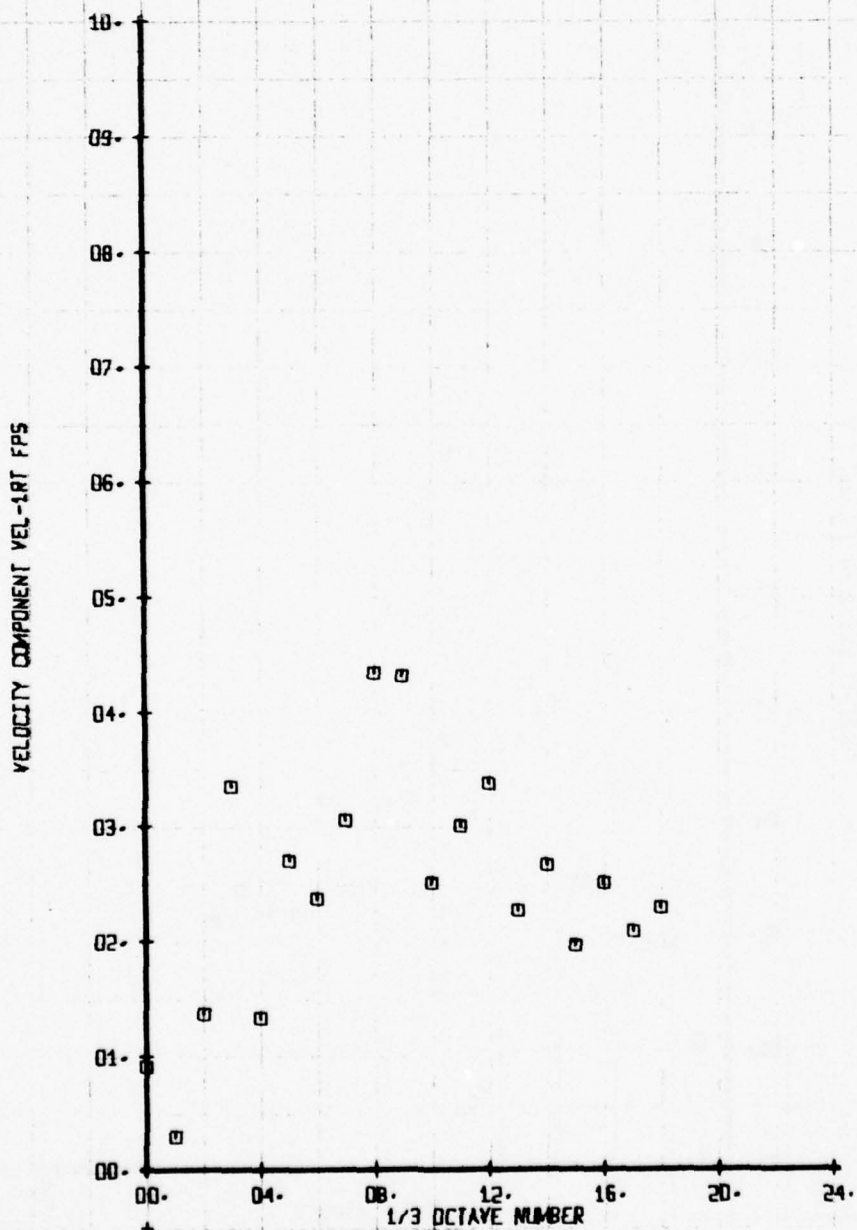
SET 7
 BVWT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE LEFT OF STAB.
 RUN 117 TP 4

SYM
 □

CH
 74

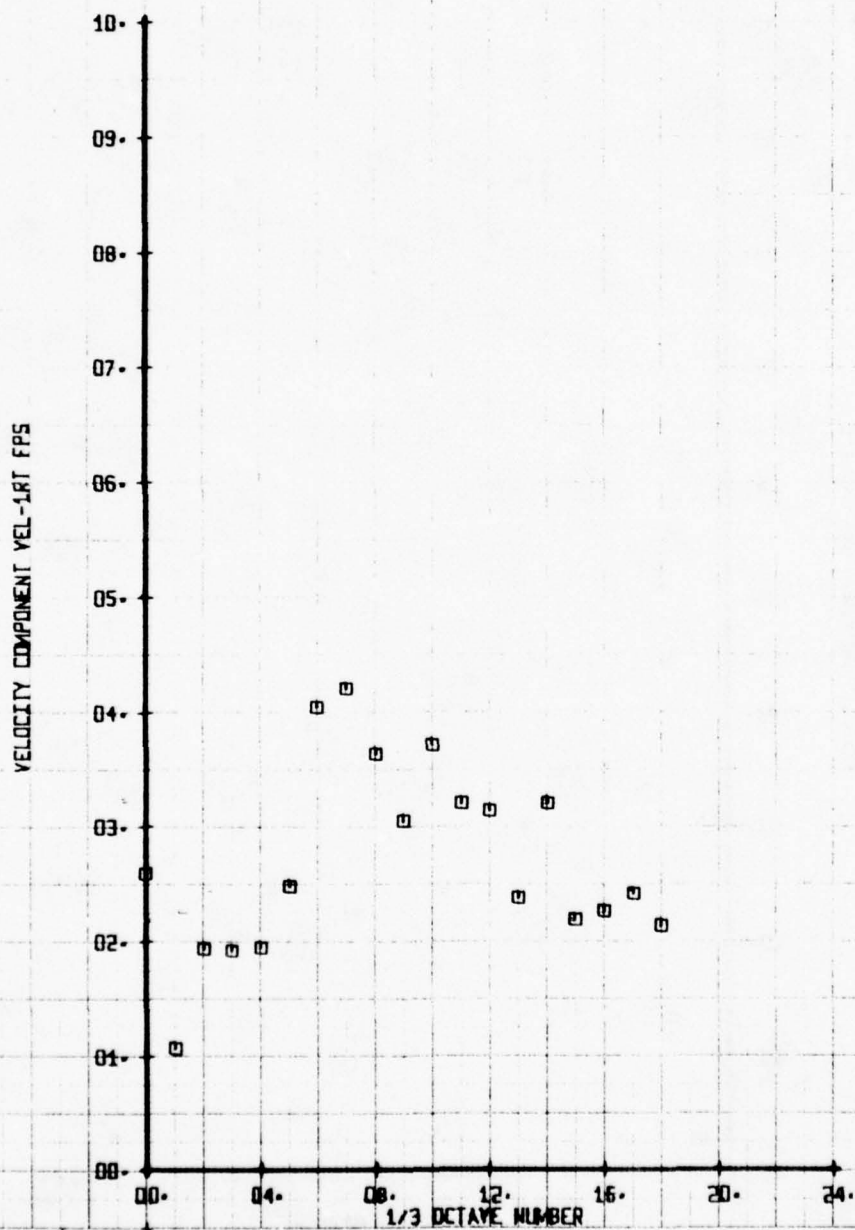
LEGEND
 PARAMETER
 VEL-1RT



ET 7 +
 WT 169

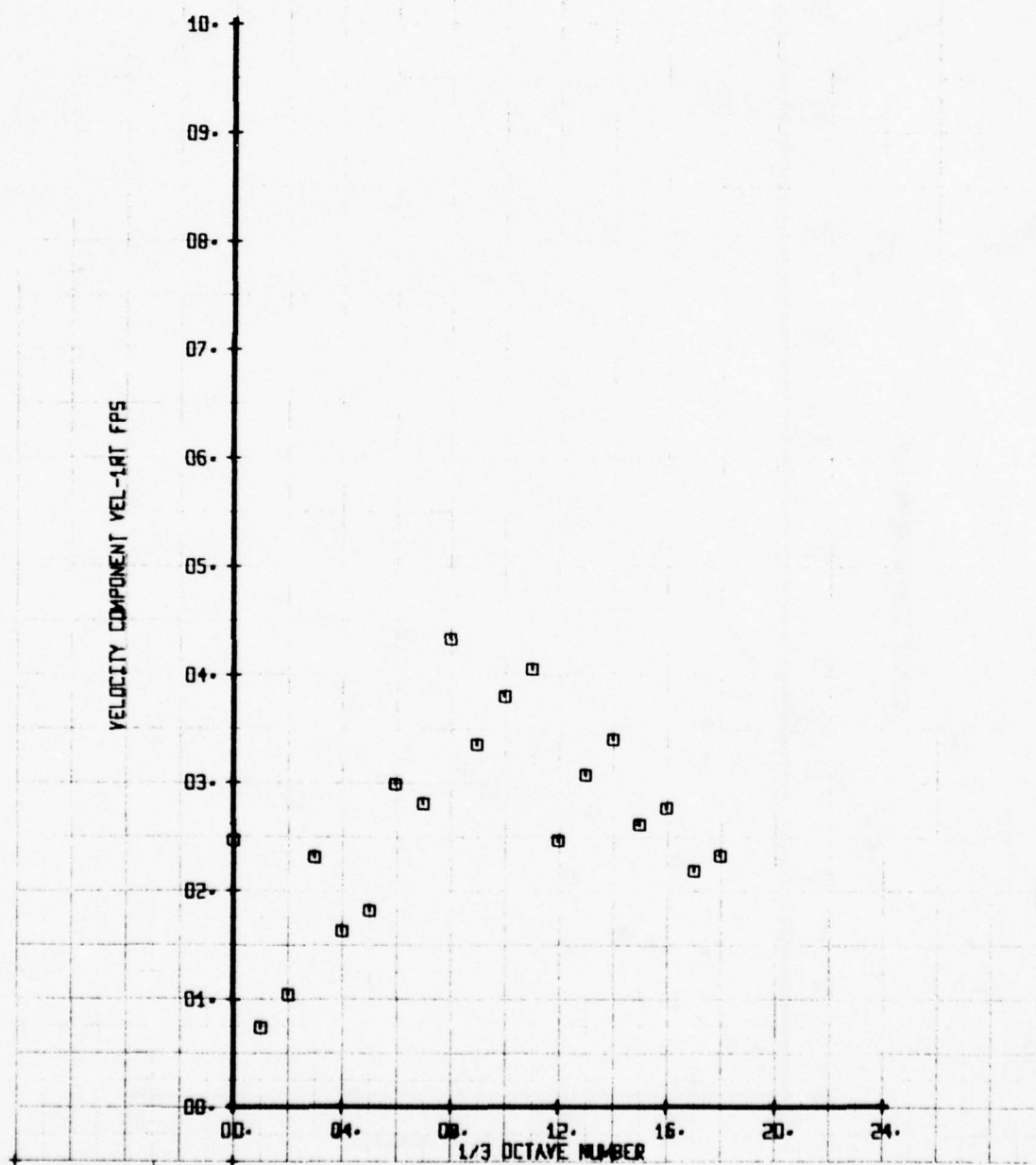
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE LEFT OF STAB.
 RUN 117 TP 6

LEGEND
 SYM CH PARAMETER
 □ 74 VEL-1RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE LEFT OF STAB.
RUN 117 TP 8

LEGEND
SYM CH PARAMETER
□ 74 VEL-1RT



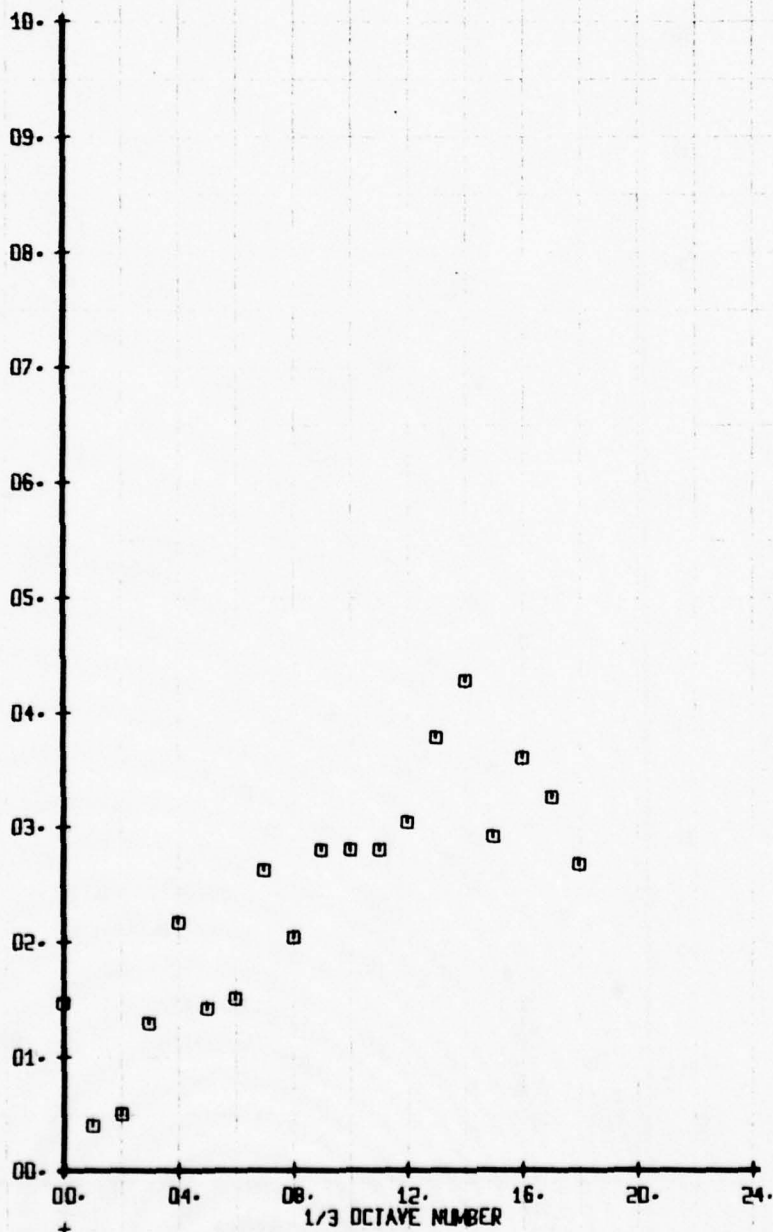
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE LEFT OF STAB.
RUN 117 TP 10

SYM
□

CH
74

LEGEND
PARAMETER
VEL-1RT

VELOCITY COMPONENT VEL-1RT FPS



268

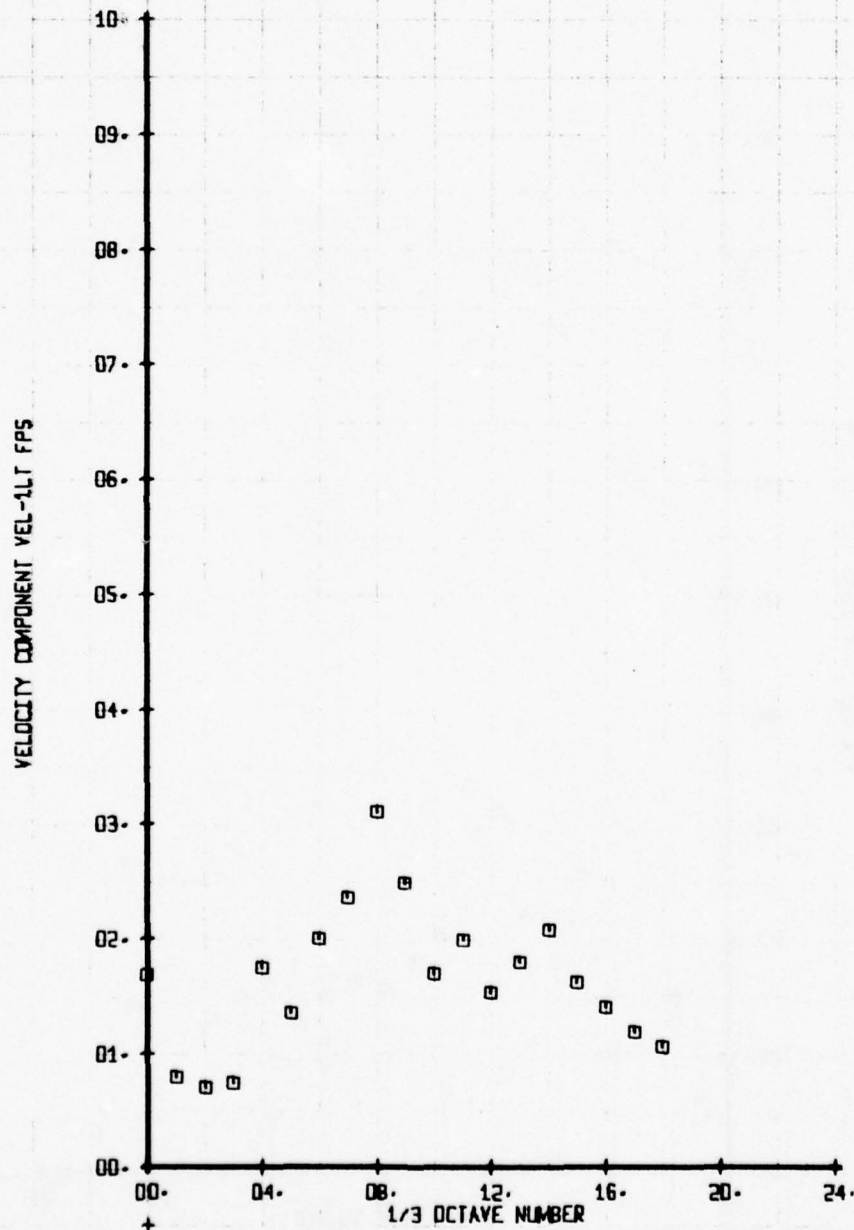
SET 7
BVWT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE LEFT OF STAB.
RUN 117 TP 2

SYM
□

CH
73

LEGEND
PARAMETER
VEL-1LT



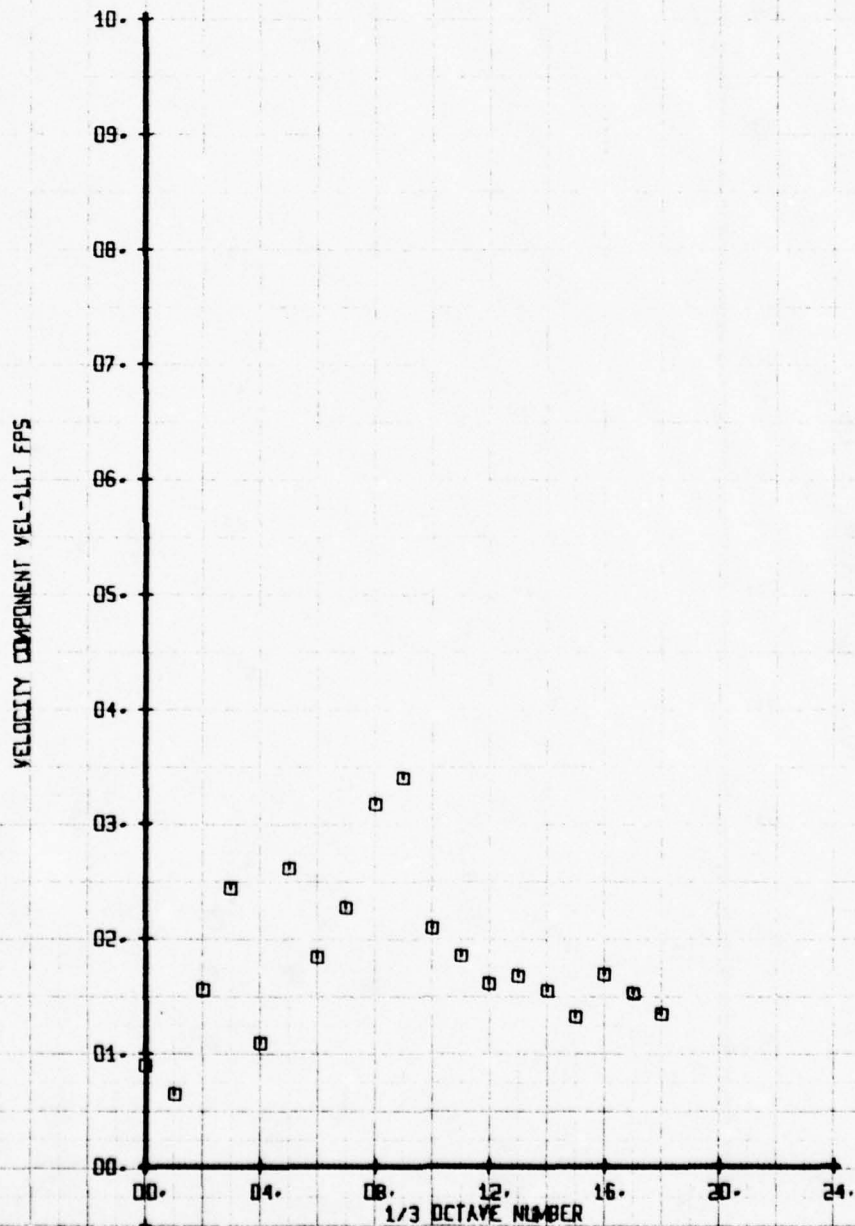
ET 7
WT 169

269

SET 7
BVWT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE LEFT OF STAB.
 RUN 117 TP 4

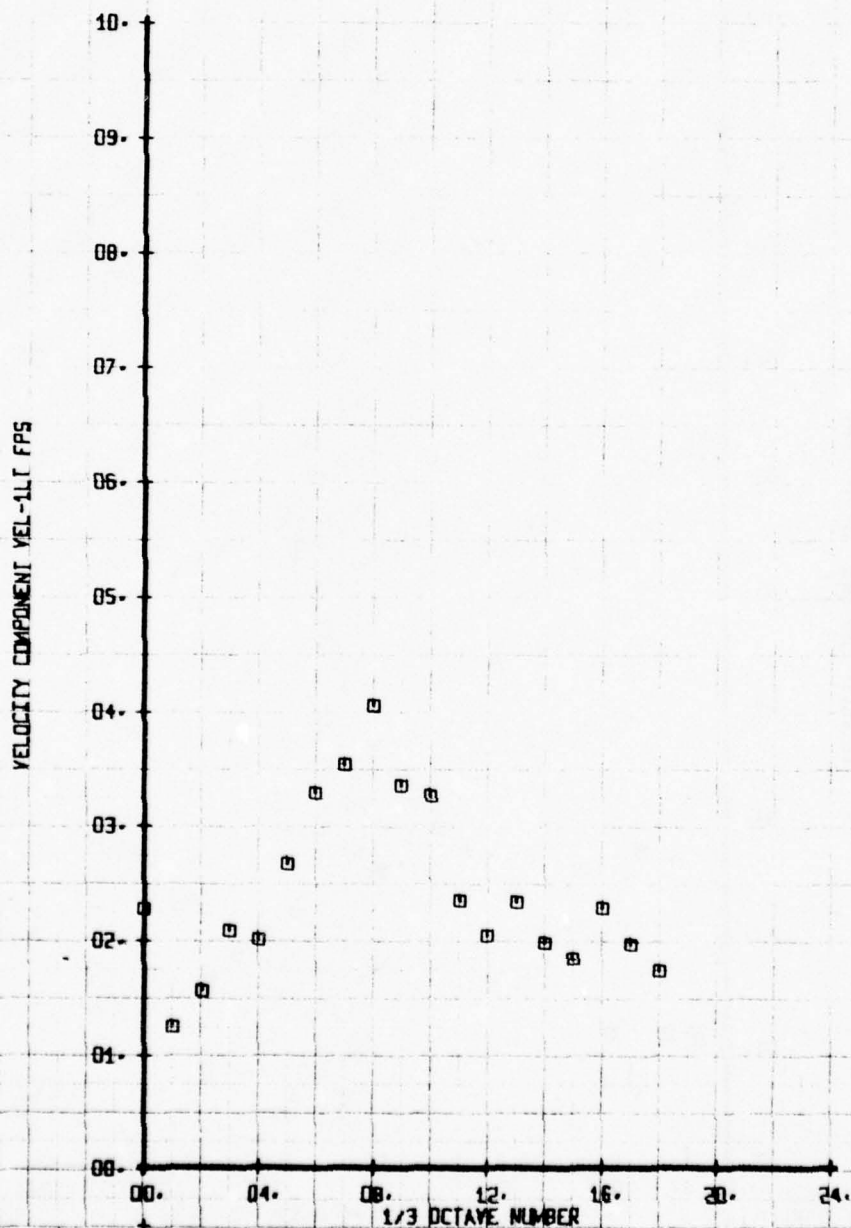
LEGEND
 SYM CH PARAMETER
 □ 73 VEL-1LT



ET 7
 WT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE LEFT OF STAB.
 RUN 117 TP 6

LEGEND		
SYM	CH	PARAMETER
□	73	VEL-1LT

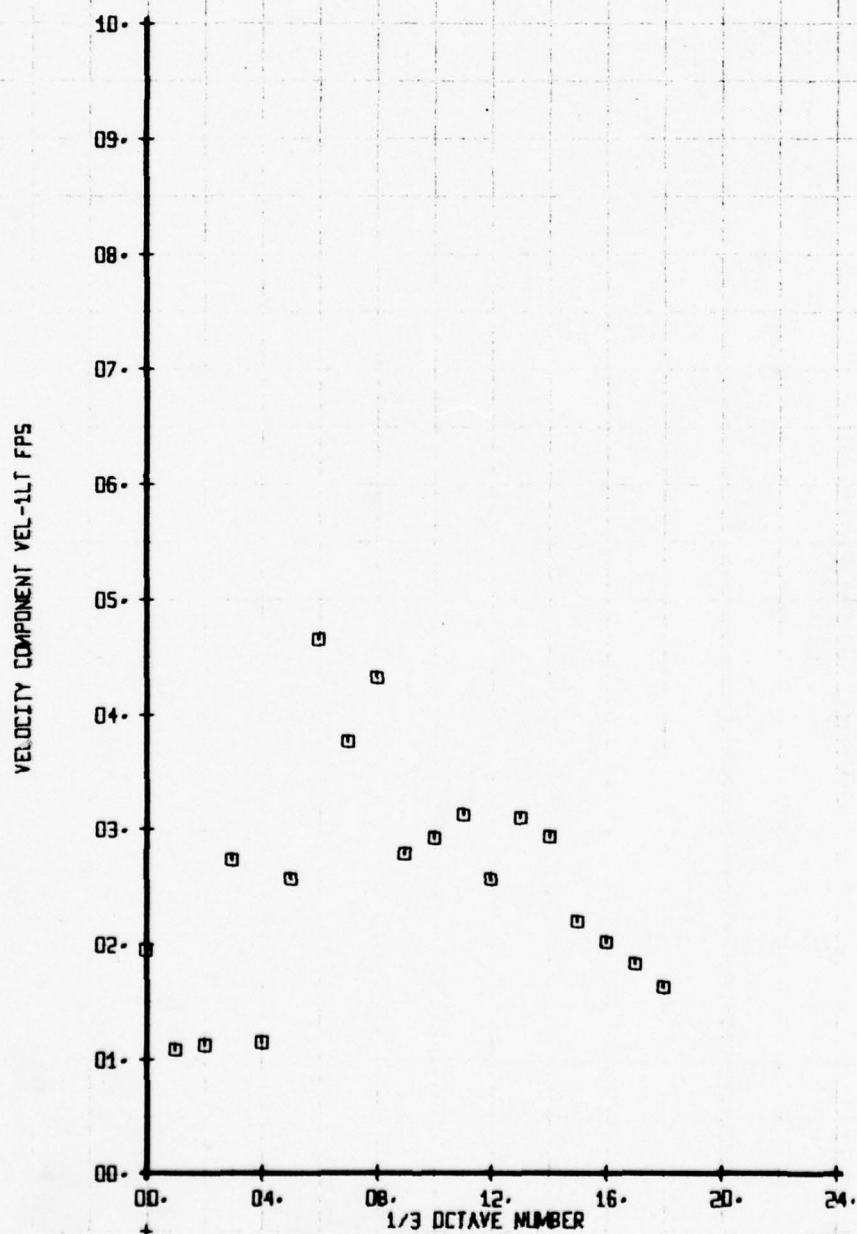


HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE LEFT OF STAB.
 RUN 117 TP 8

SYM
 □

CH
 73

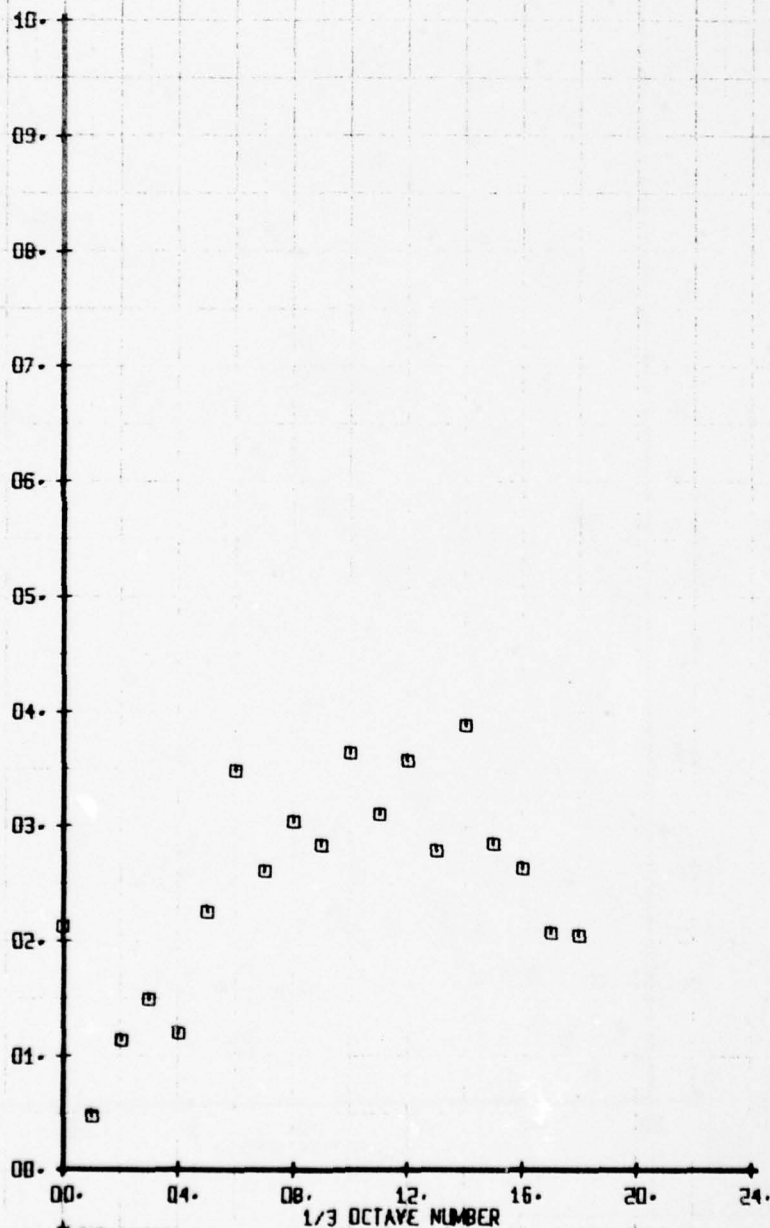
LEGEND
 PARAMETER
 VEL-1LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE LEFT OF STAB.
 RUN 117 TP 10

SYN CH PARAMETER
 0 73 VEL-1LT

VELOCITY COMPONENT VEL-1LT FPS



273

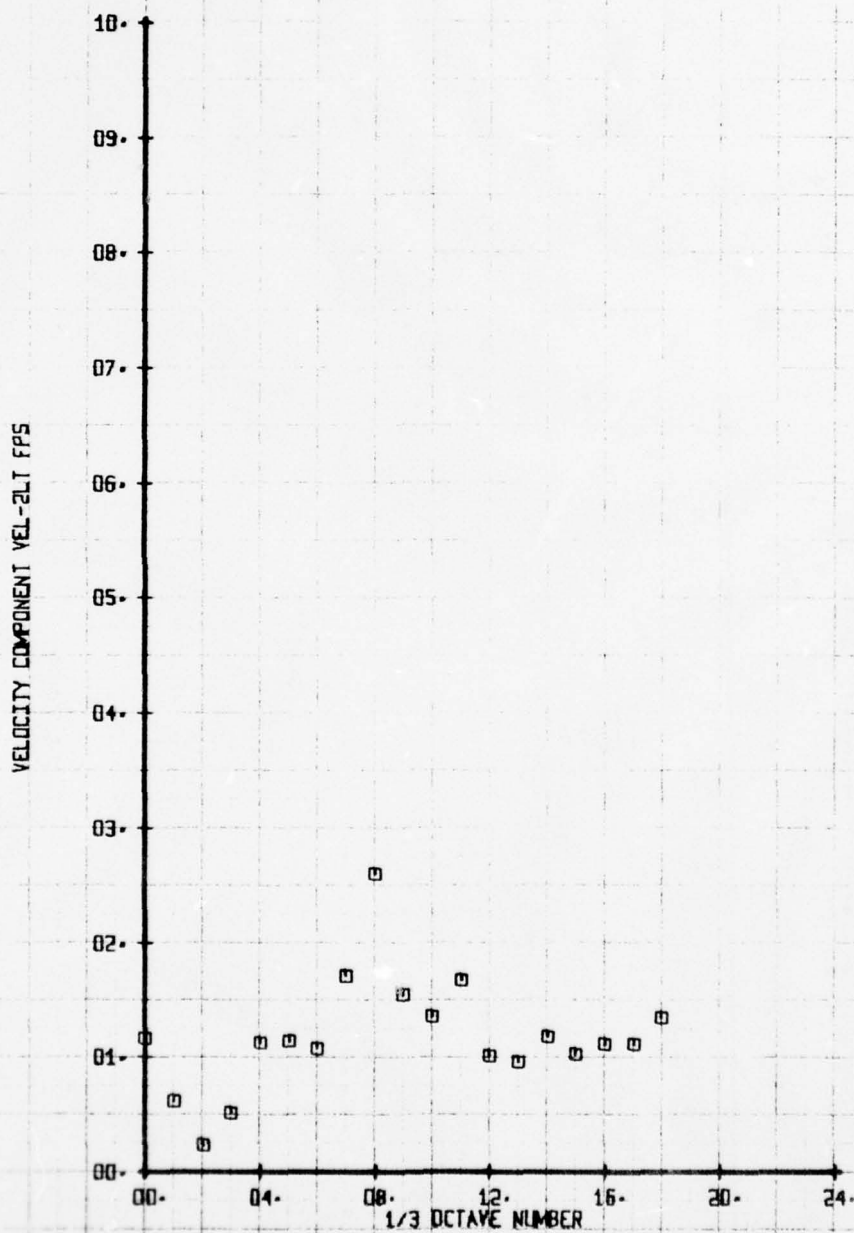
SET 7
 BWWT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE LEFT OF STAB.
RUN 117 TP 2

SYM
□

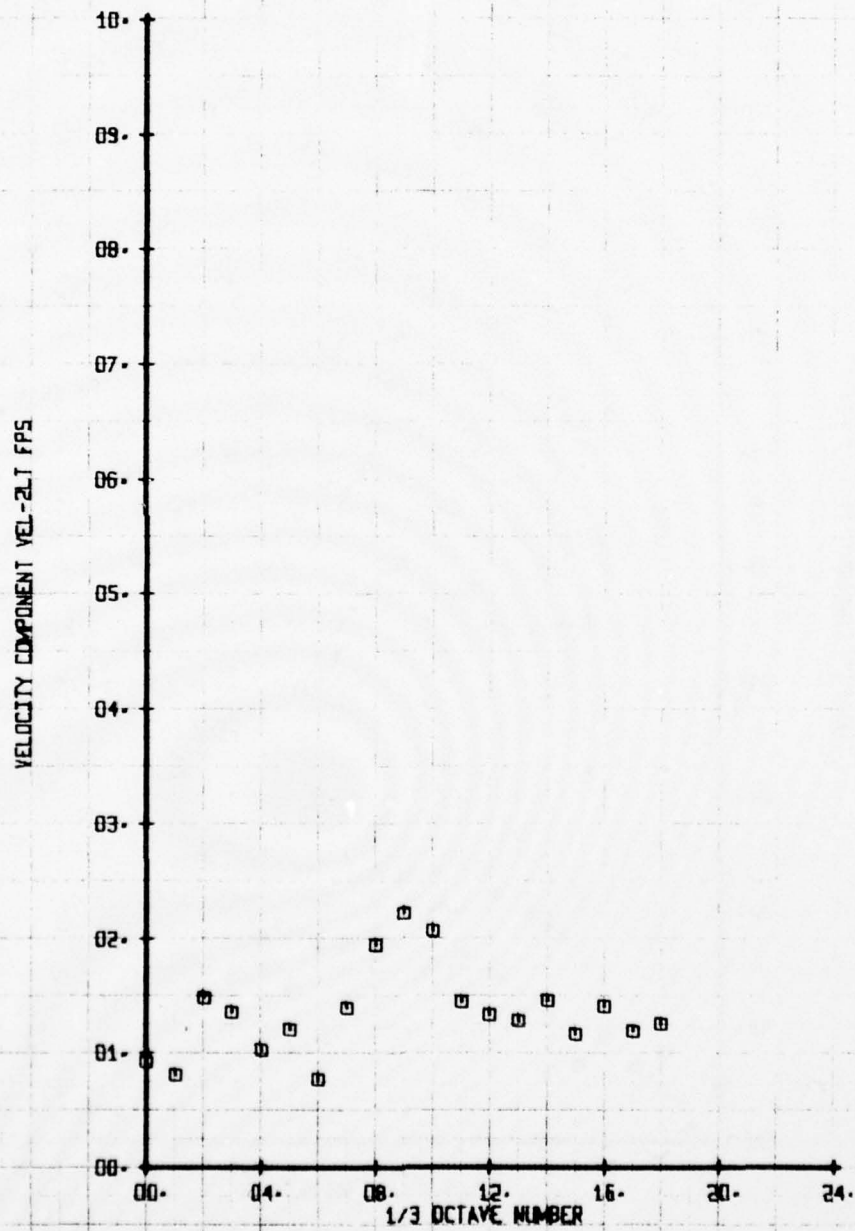
CH
72

LEGEND
PARAMETER
VEL-2LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE LEFT OF STAB.
RUN 117 TP 4

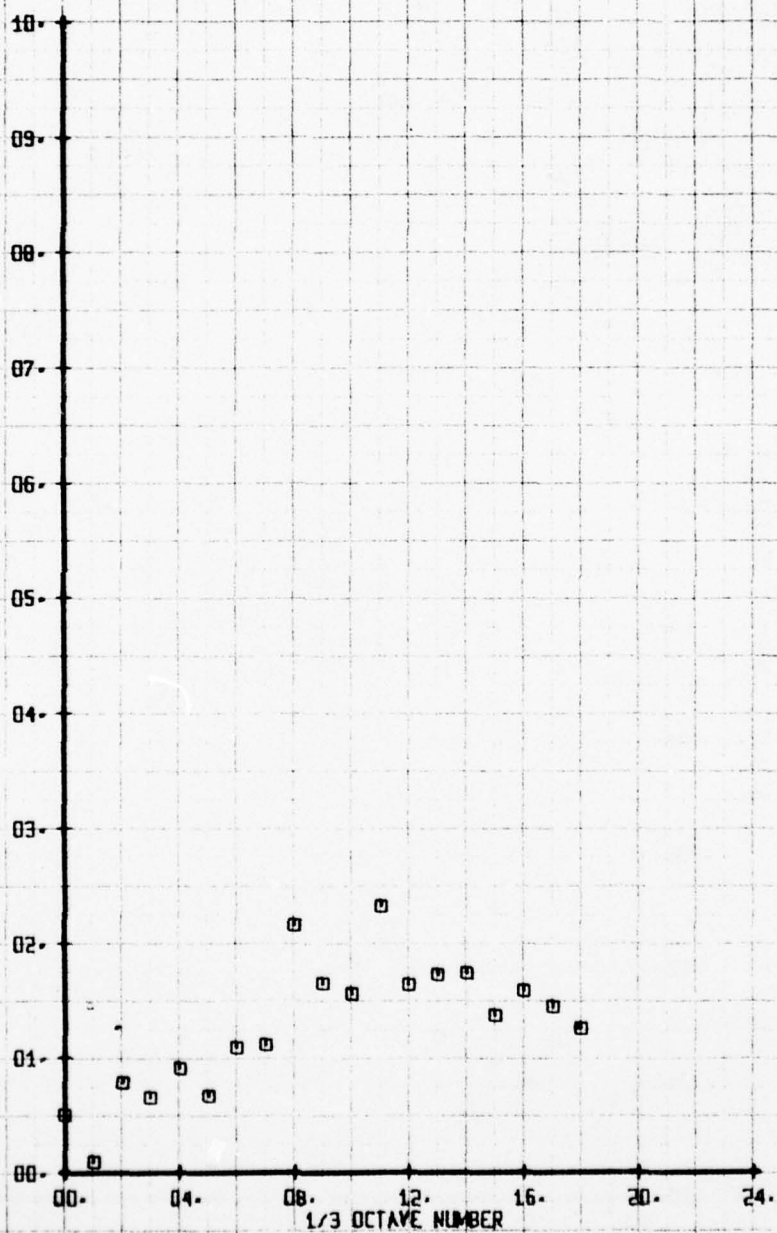
LEGEND
SYM CH PARAMETER
□ 72 VEL-2LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE LEFT OF STAB.
 RUN 117 TP 6

SYM	CH	PARAMETER
□	72	VEL-2LT

VELOCITY COMPONENT VEL-2LT FPS



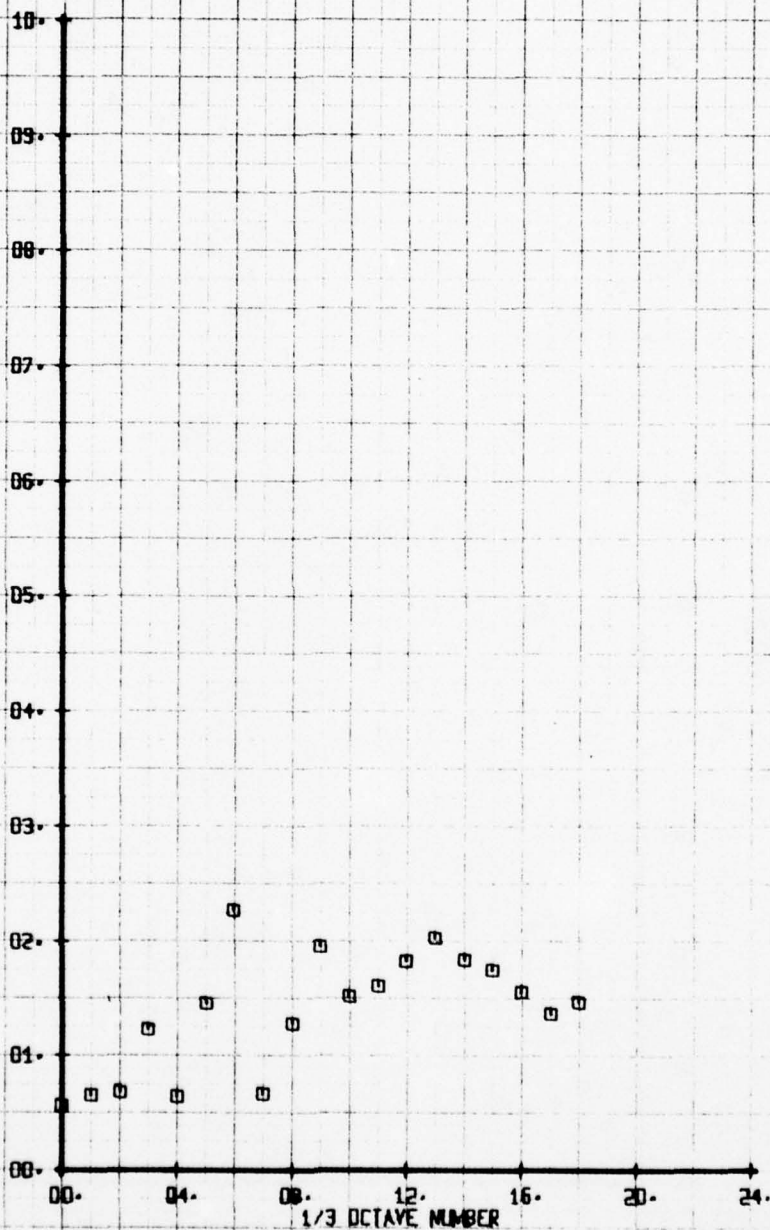
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE LEFT OF STAB.
 RUN 117 TP 0

SYM
 □

CH
 72

LEGEND
 PARAMETER
 VEL-2LT

VELOCITY COMPONENT VEL-2LT FPS



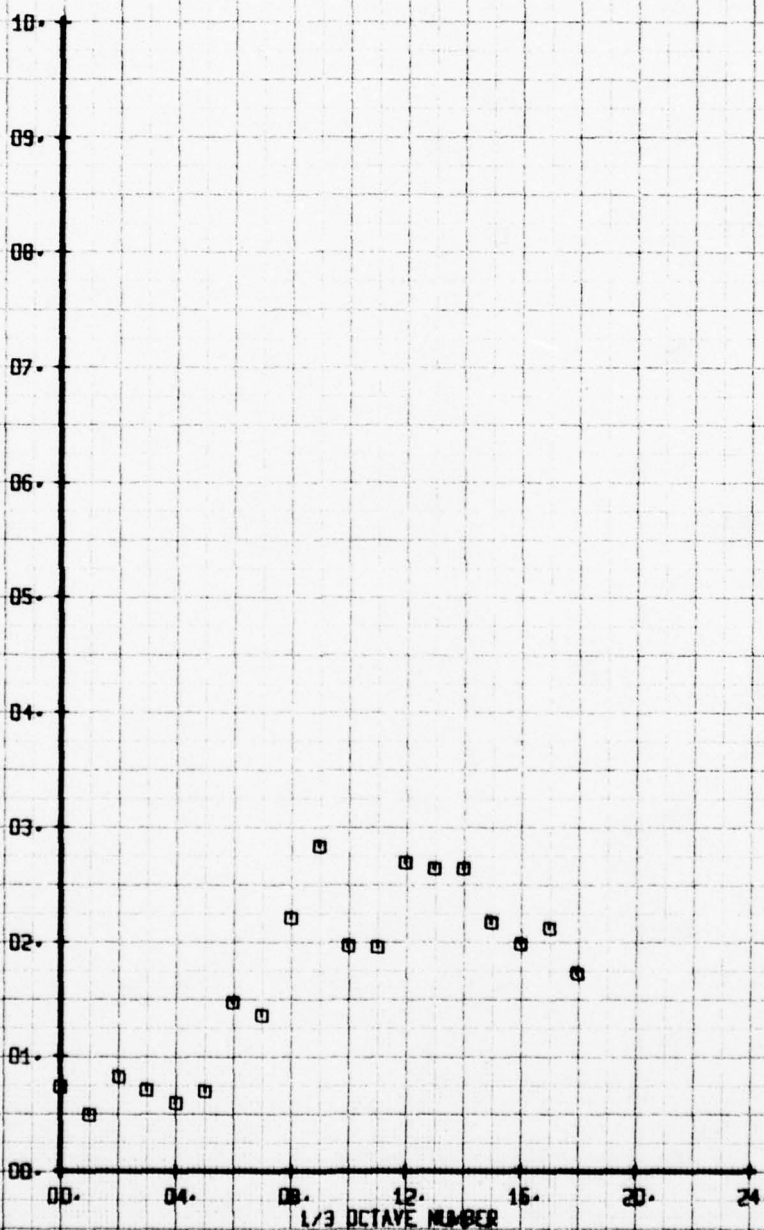
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE LEFT OF STAB.
 RUN 117 TP 10

SYM
 □

CH
 72

LEGEND
 PARAMETER
 VEL-ZLT

VELOCITY COMPONENT VEL-ZLT FPS

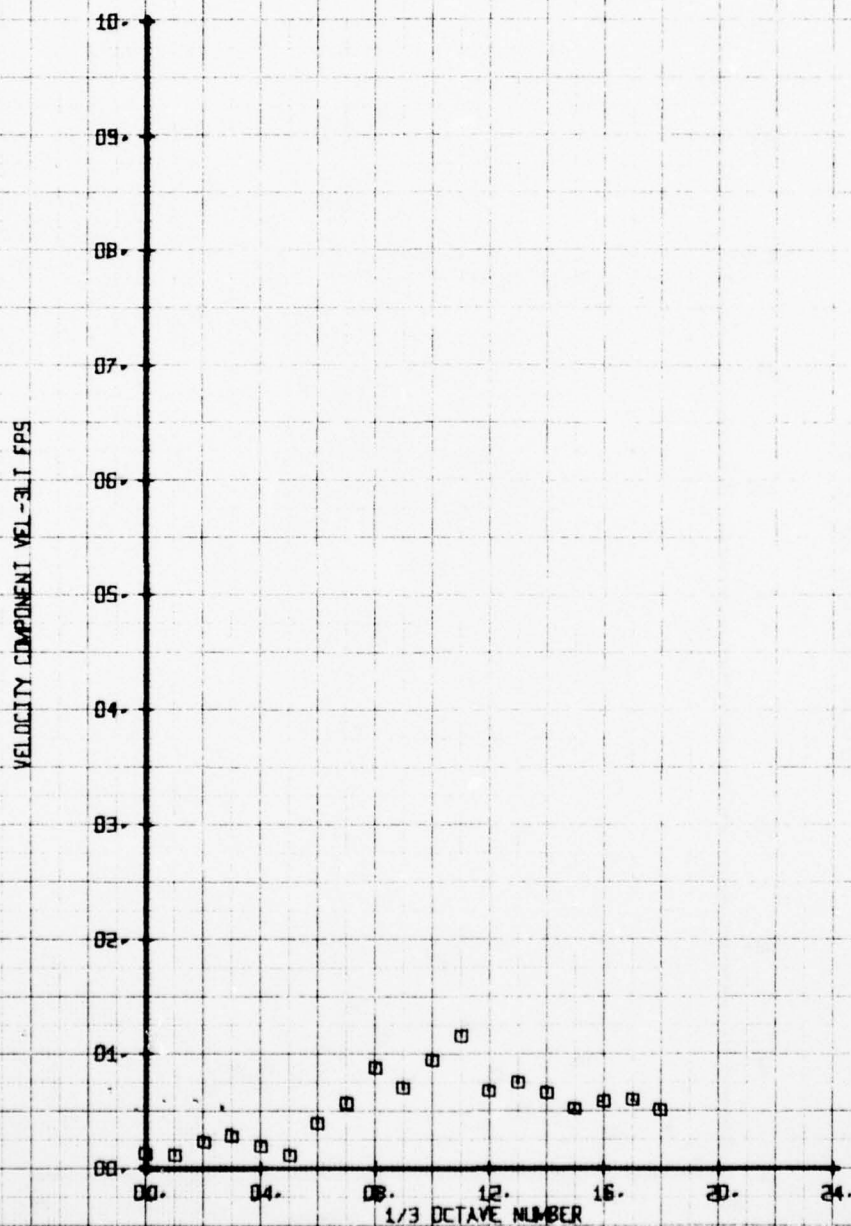


278

SET 7
 BVWT 169

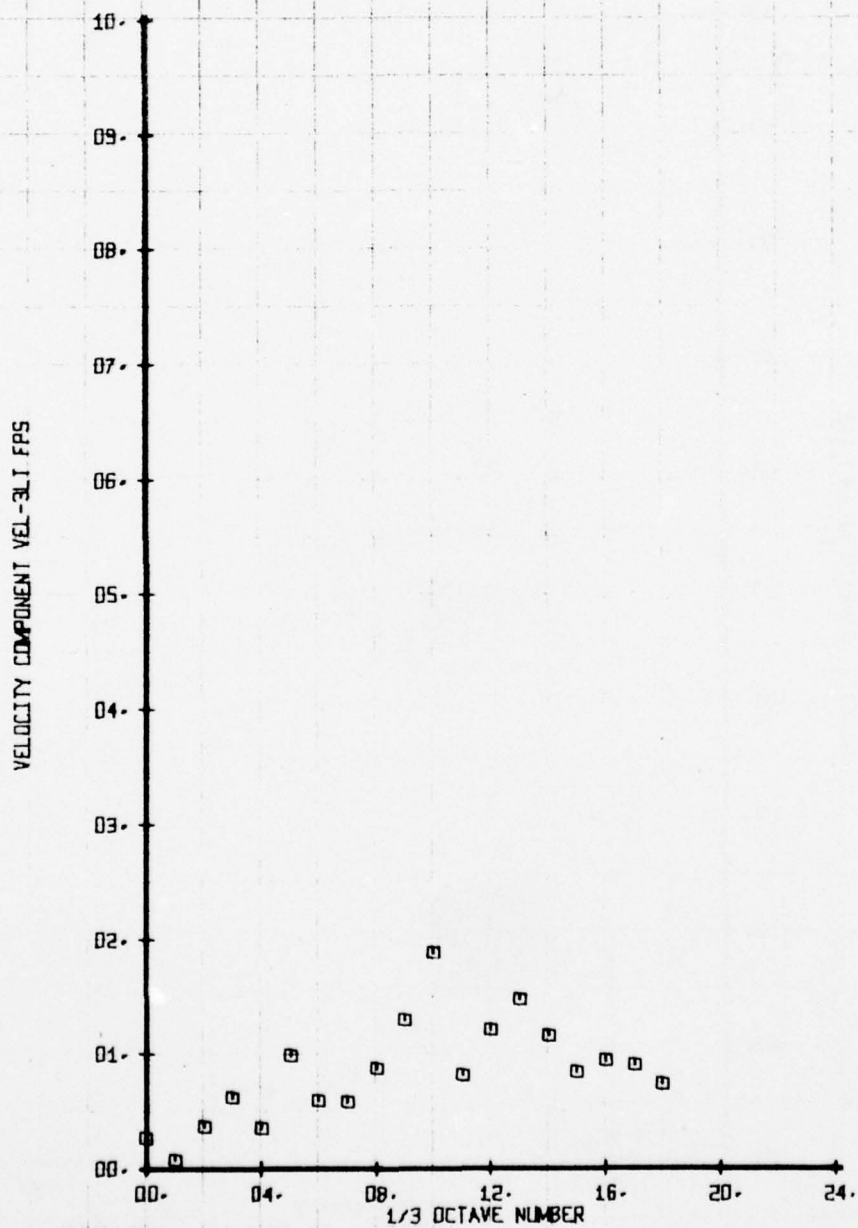
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE LEFT OF STAB.
 RUN 117 TP 2

SYM	CH	PARAMETER
□	70	VEL-3LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE LEFT OF STAB.
RUN 117 TP 4

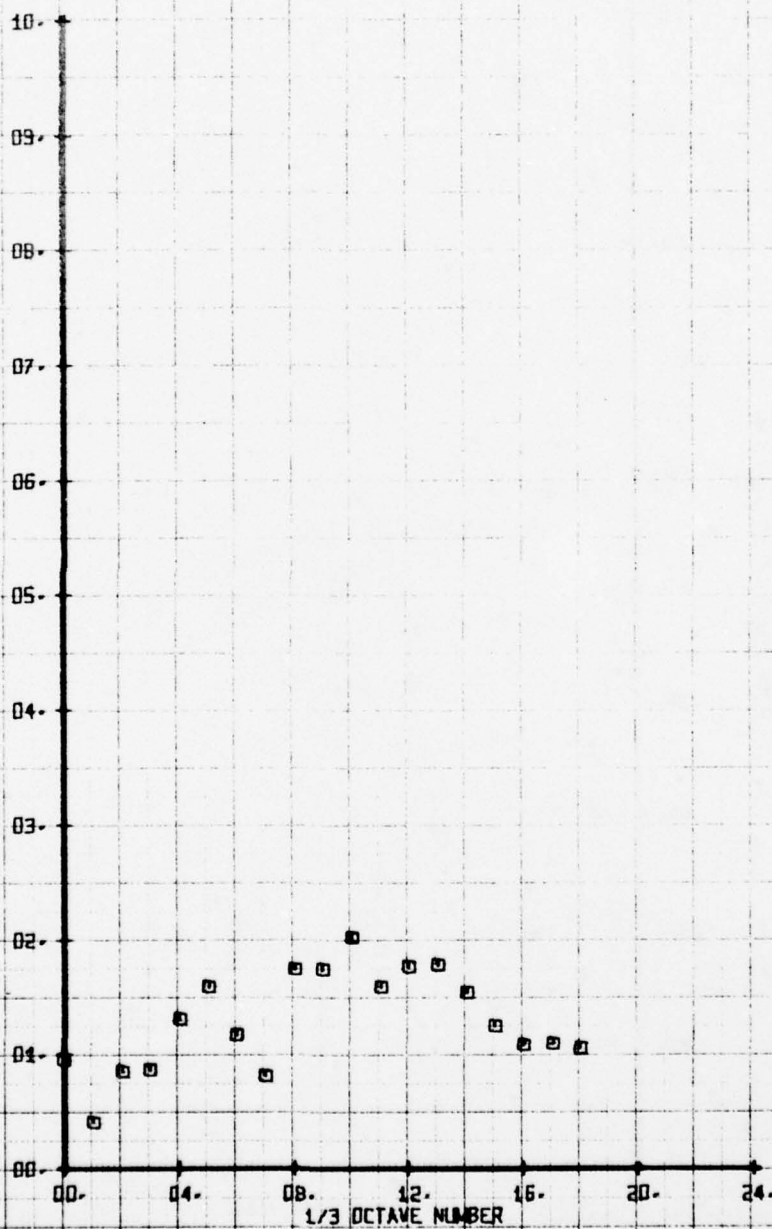
LEGEND
SYM CH PARAMETER
□ 70 VEL-3LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE LEFT OF STAB.
 RUN 117 TP 6

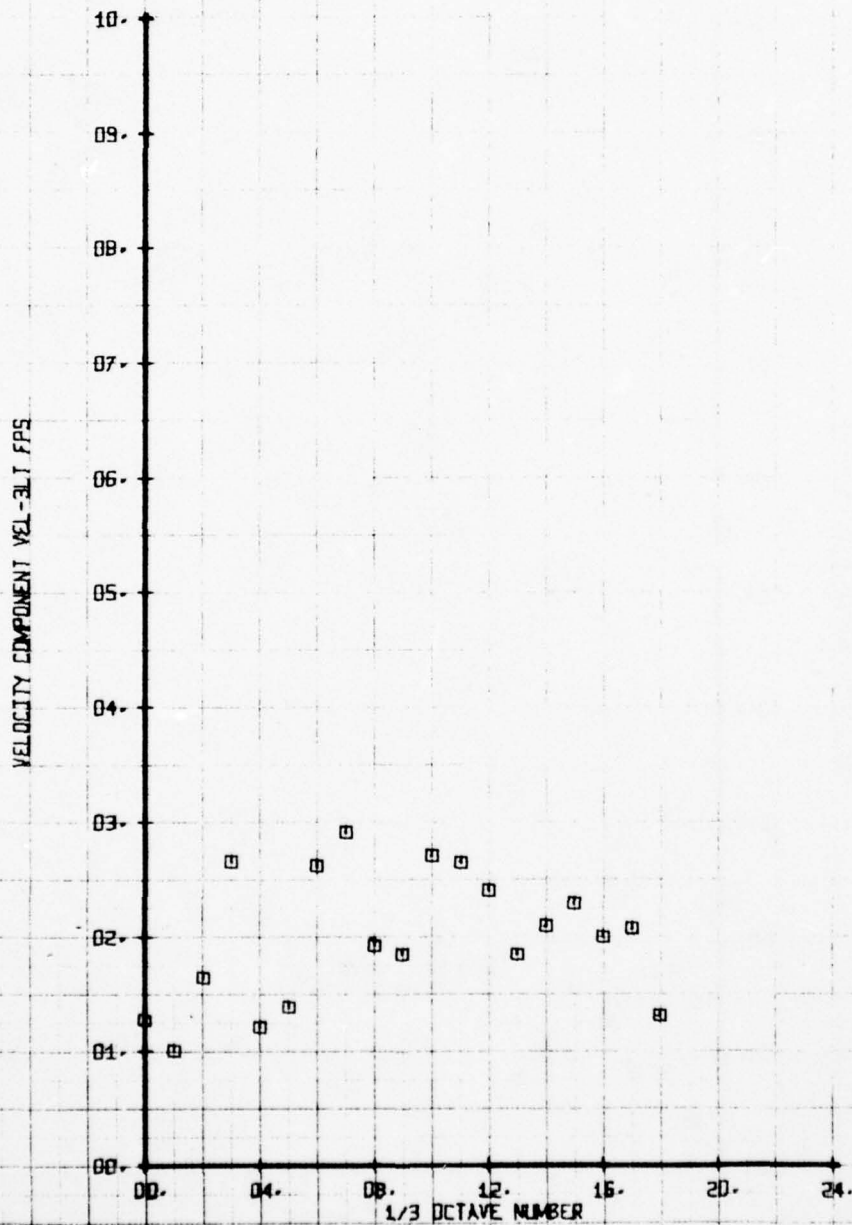
LEGEND
 SYM CH PARAMETER
 □ 70 VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE LEFT OF STAB.
 RUN 117 TP B

LEGEND
 SYM CH PARAMETER
 □ 70 VEL-3LT



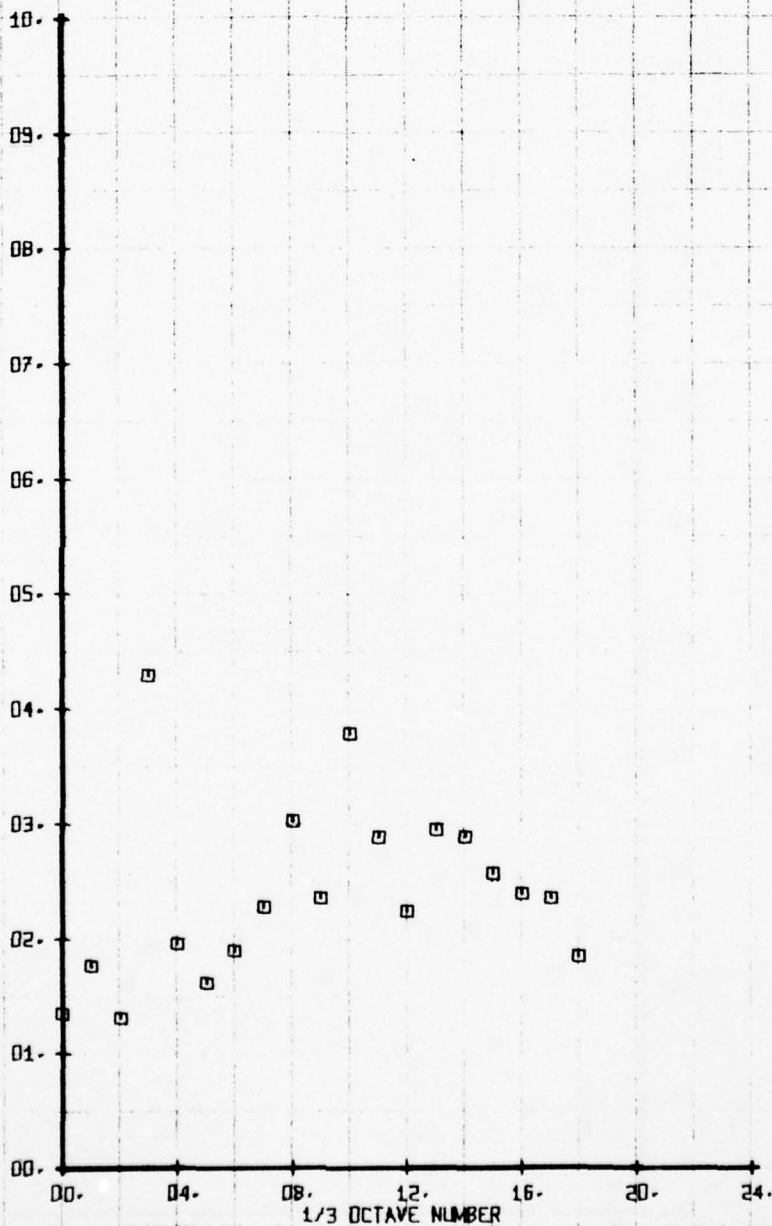
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE LEFT OF STAB.
 RUN 117 TP 10

SYM
 □

CH
 70

LEGEND
 PARAMETER
 VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS

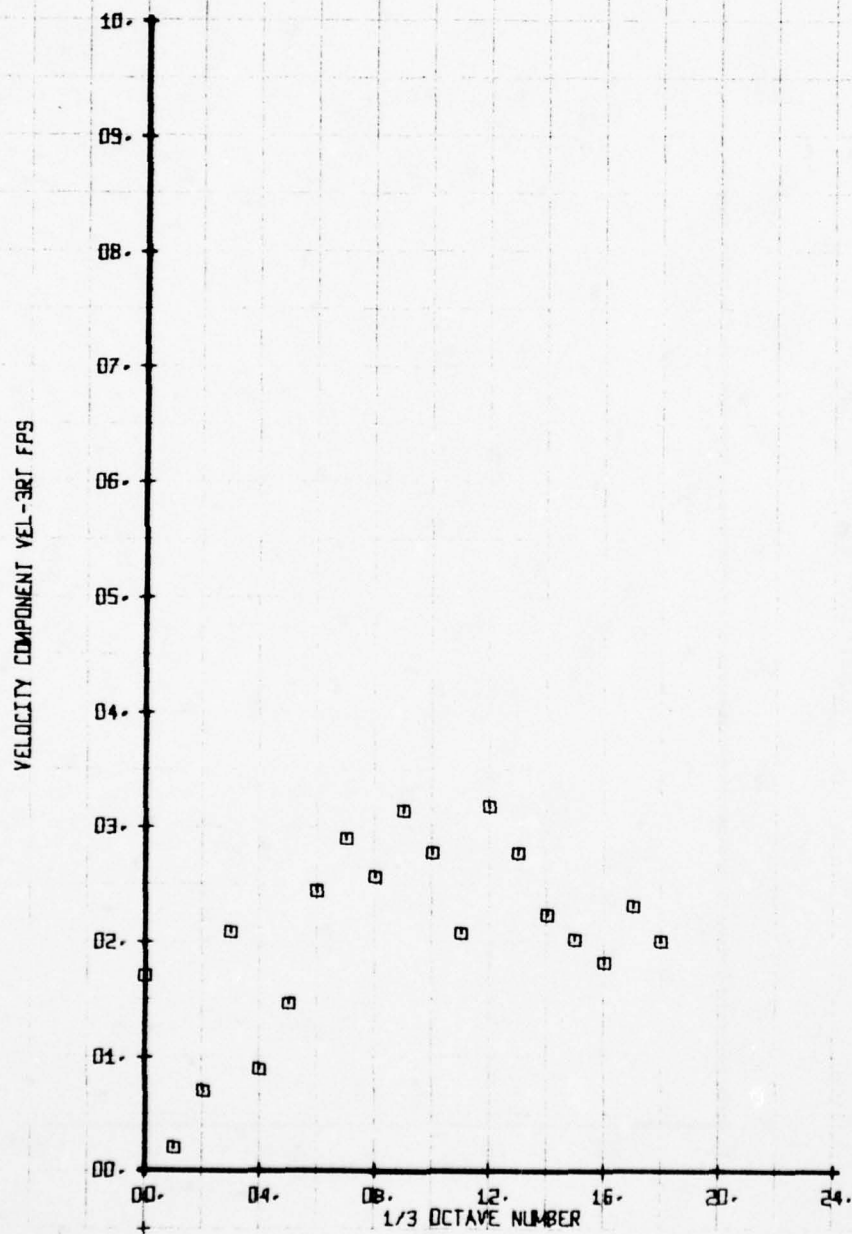


283

SET 7
 BWVT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE LEFT OF STAB.
RUN 11B TP 2

LEGEND	
SYM	CH
□	71
	PARAMETER
	VEL-3RT

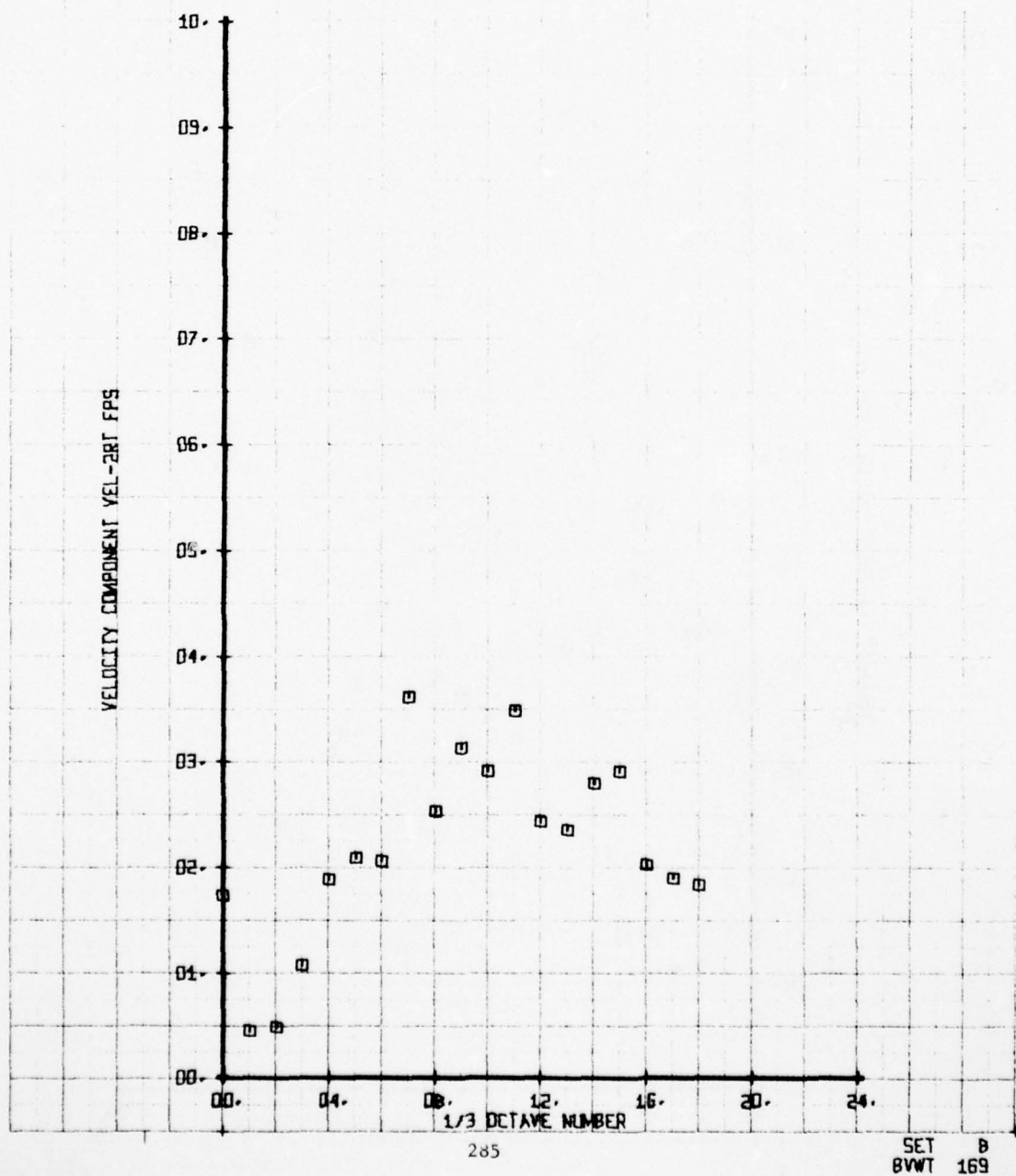


284

SET 8
BVWT 169

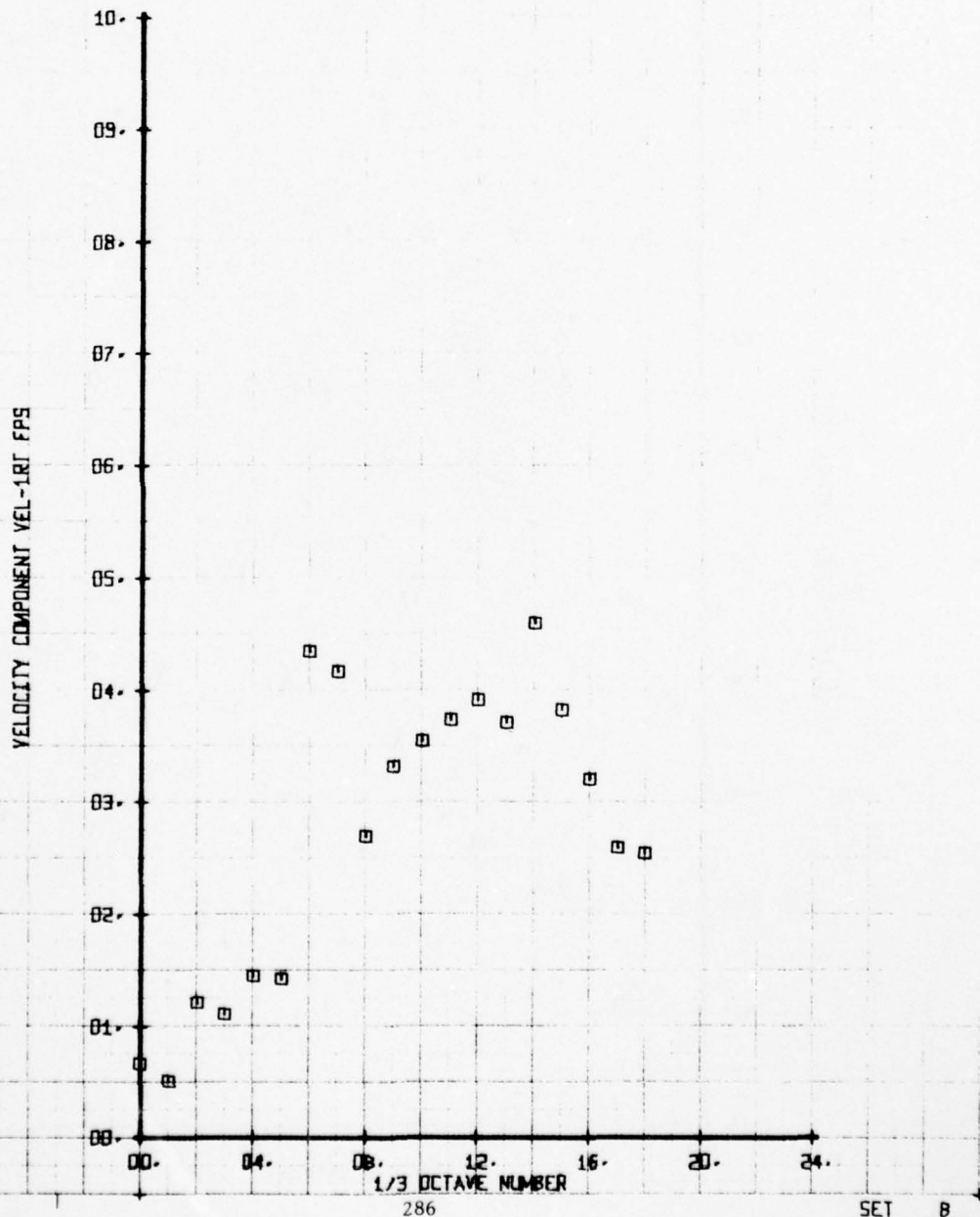
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE LEFT OF STAB.
RUN 118 TP 2

LEGEND
SYM CH PARAMETER
□ 75 VEL-2RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE LEFT OF STAB.
 RUN 11B TP 2

LEGEND
 SYM CH PARAMETER
 □ 74 VEL-1RT

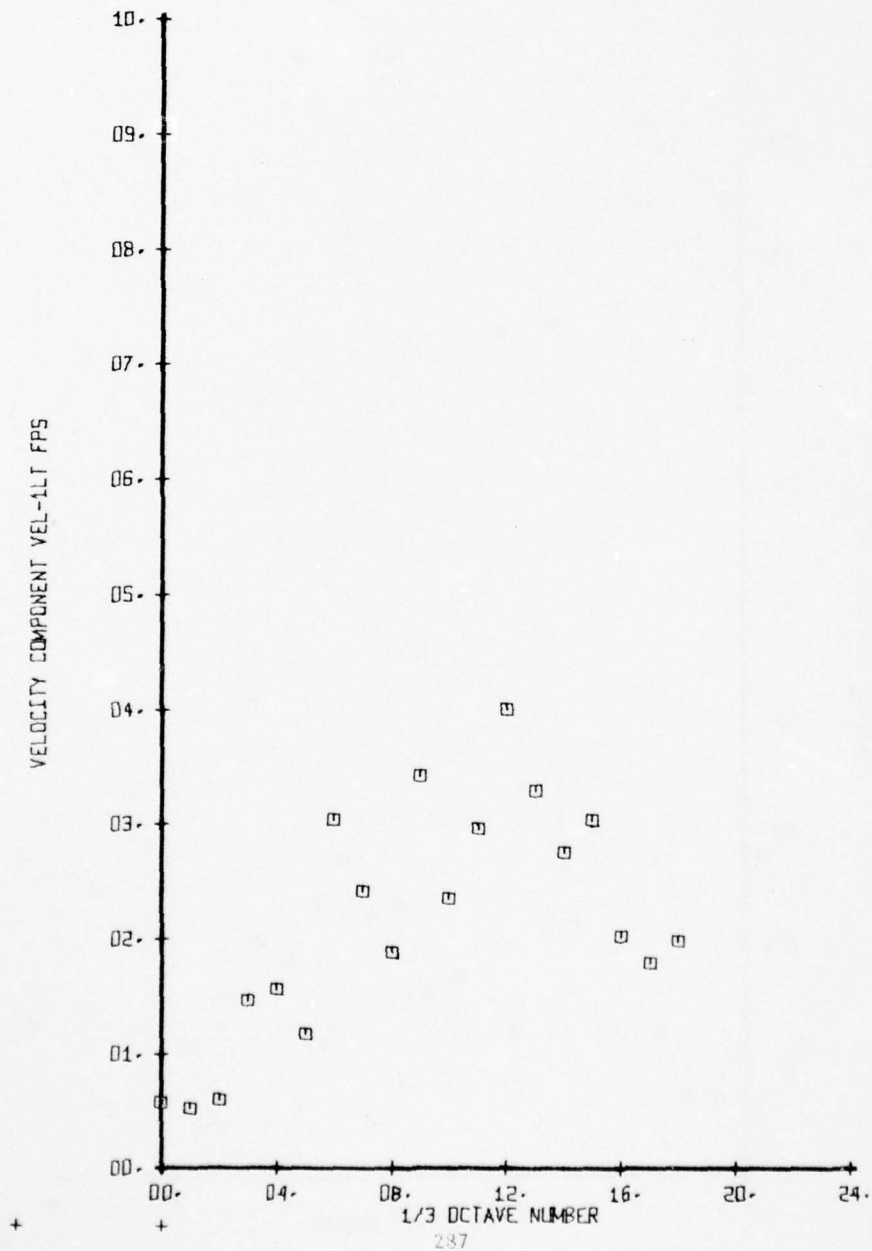


286

SET 8
 BVWT 169

NOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE LEFT OF STAB.
 RUN 11B TP 2

LEGEND
 SYM CH PARAMETER
 □ 73 VEL-1LT



SET 8
 BVWT 169

AD-A061 861

BOEING VERTOL CO PHILADELPHIA PA F/6 1/3
INTERACTIONAL AERODYNAMICS OF THE SINGLE ROTOR HELICOPTER CONF--ETC(U)
SEP 78 P F SHERIDAN DAAJ02-77-C-0020

F/G 1/3

DAAJ02-77-C-0020

UNCLASSIFIED

USARTL-TR-78-23F

NL

4 OF 4
ADA
061861

061861

942

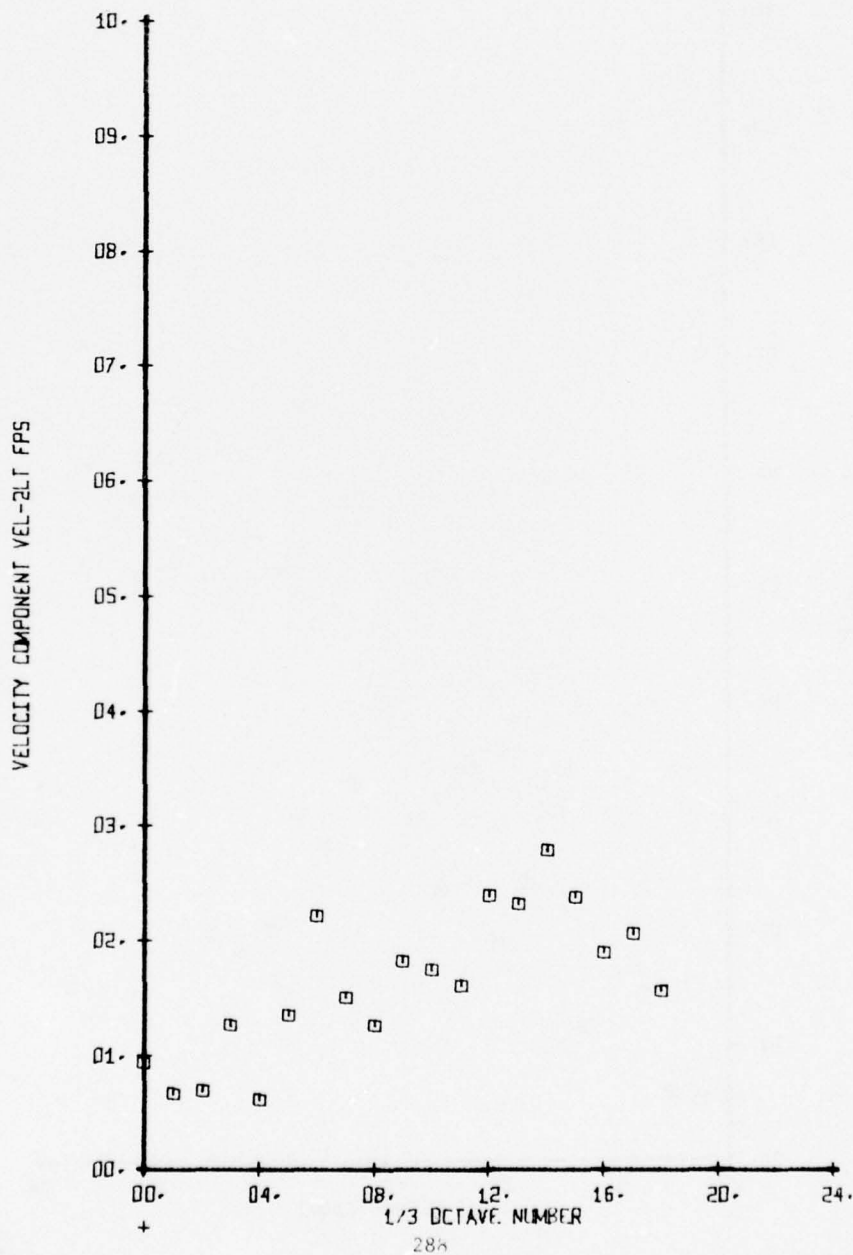
END
DATE
FILMED

3-79
DDC

DDC

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE LEFT OF STAB.
 RUN 11B TP 2

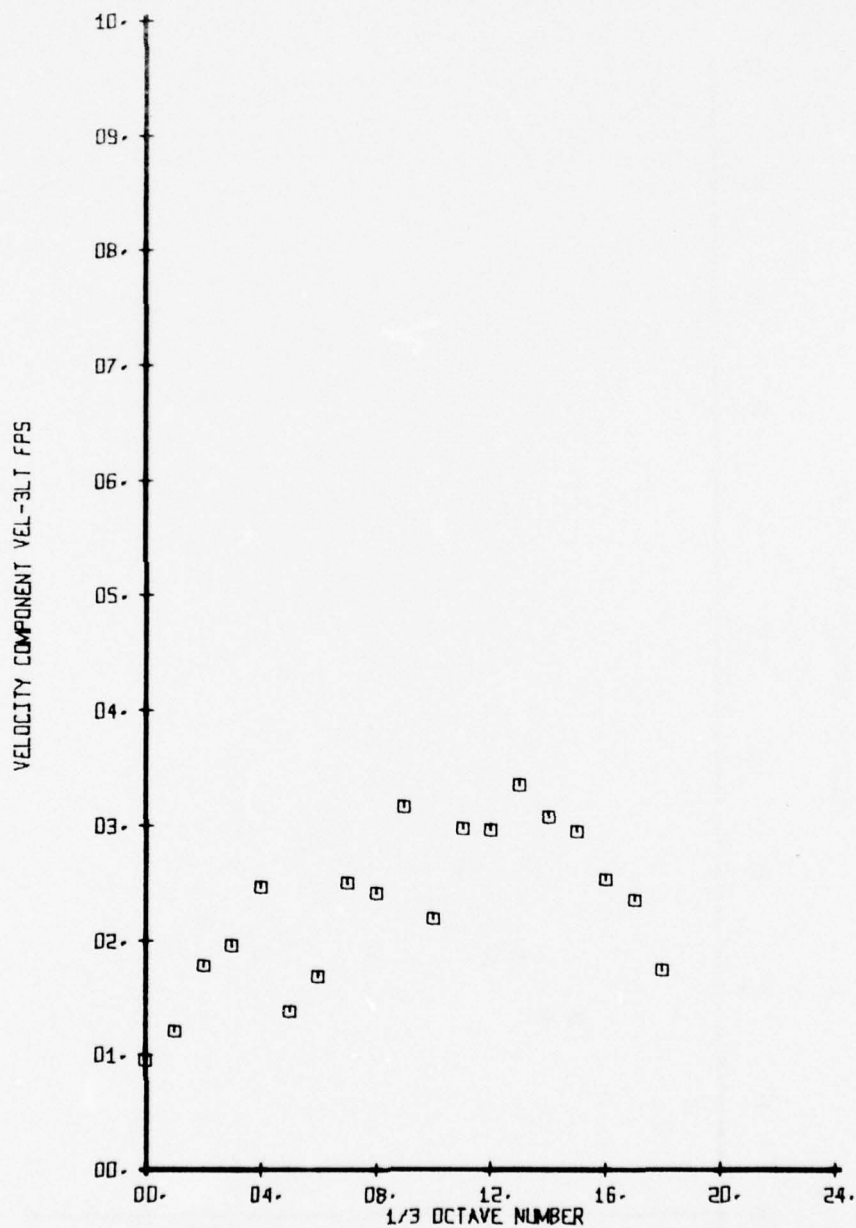
LEGEND
 SYM CH PARAMETER
 □ 72 VEL-2LT



SET 8
 BWVT 153

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE LEFT OF STAB.
 RUN 11B TP 2

LEGEND
 SYM CH PARAMETER
 □ 70 VEL-3LT



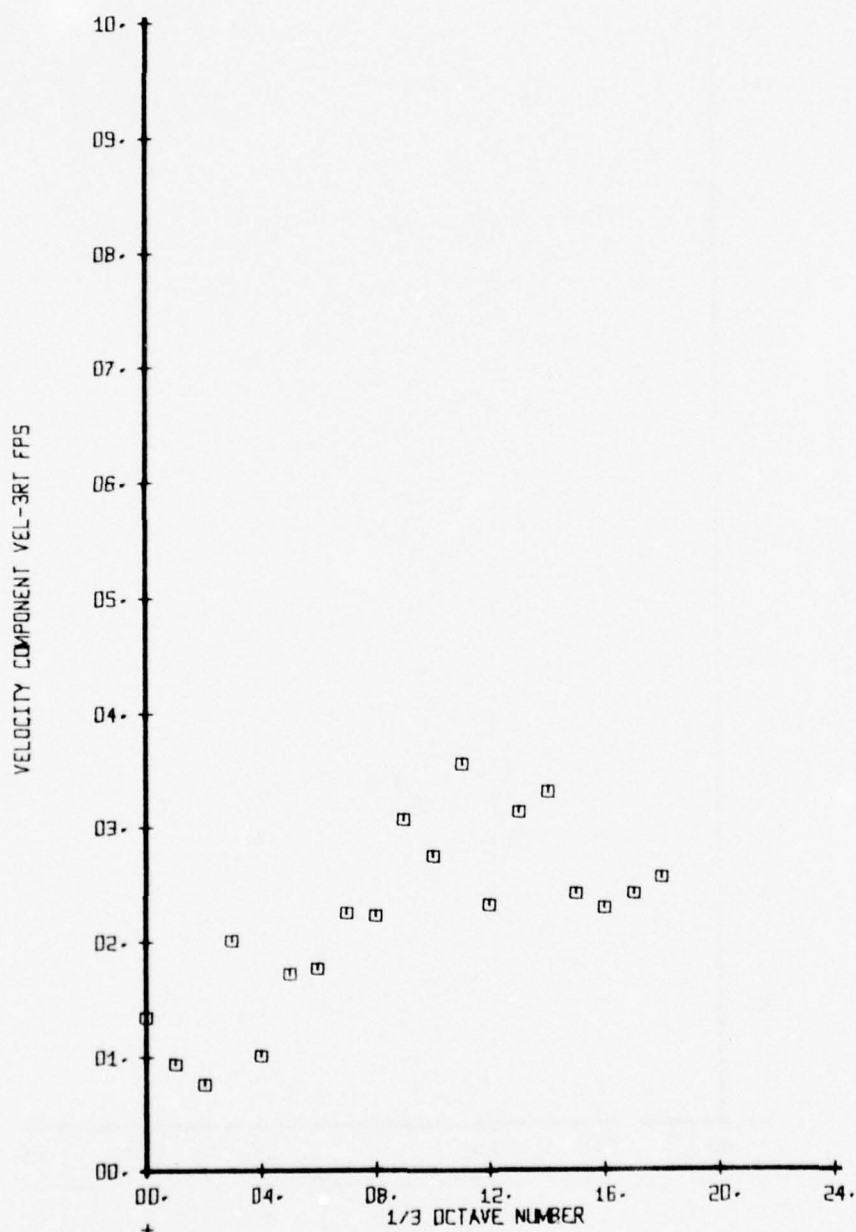
SET B +
 WT 169

289

SET B +
 BVWT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE RT. OF STAB-
 RUN 119 TP 2

LEGEND
 SYM CH PARAMETER
 □ 71 VEL-3RT



ET 9 +
 WT 169

SET 9 +
 BWWT 169

290

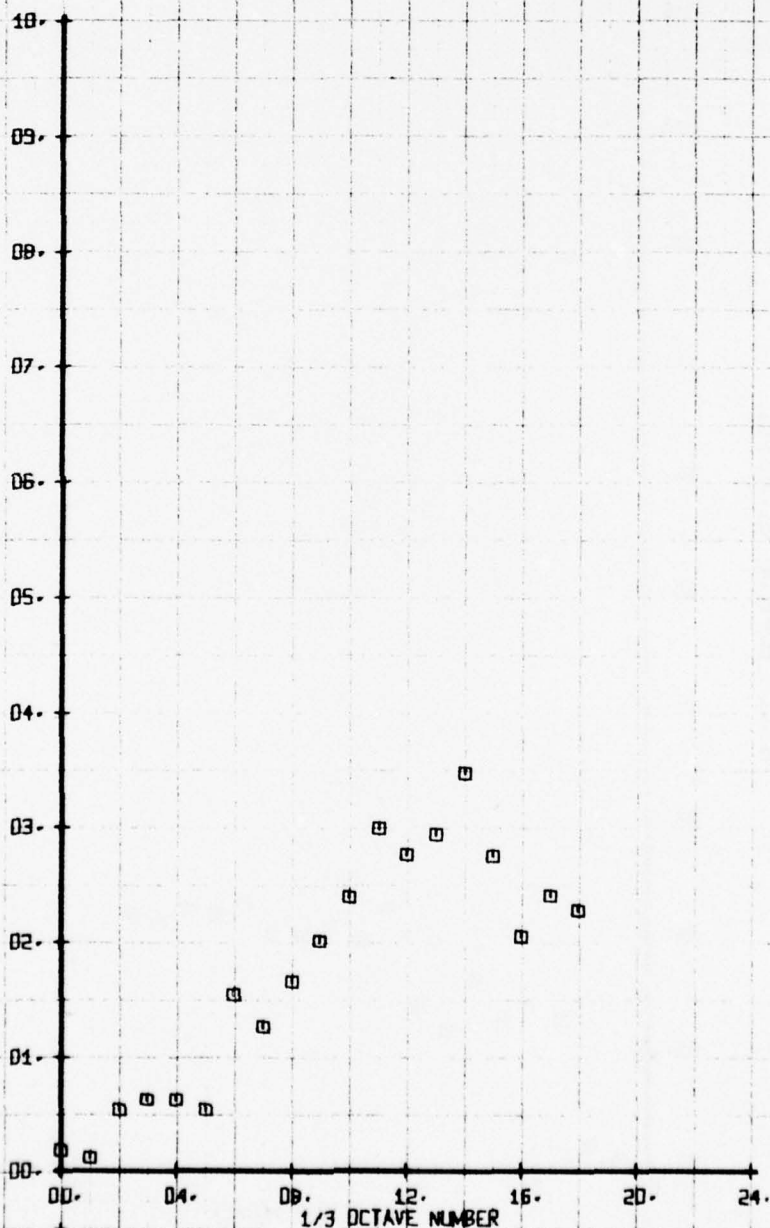
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE RT. OF STAB.
 RUN 119 TP 5

SYM
 □

CH
 71

LEGEND
 PARAMETER
 VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS



ET 9
 WT 169

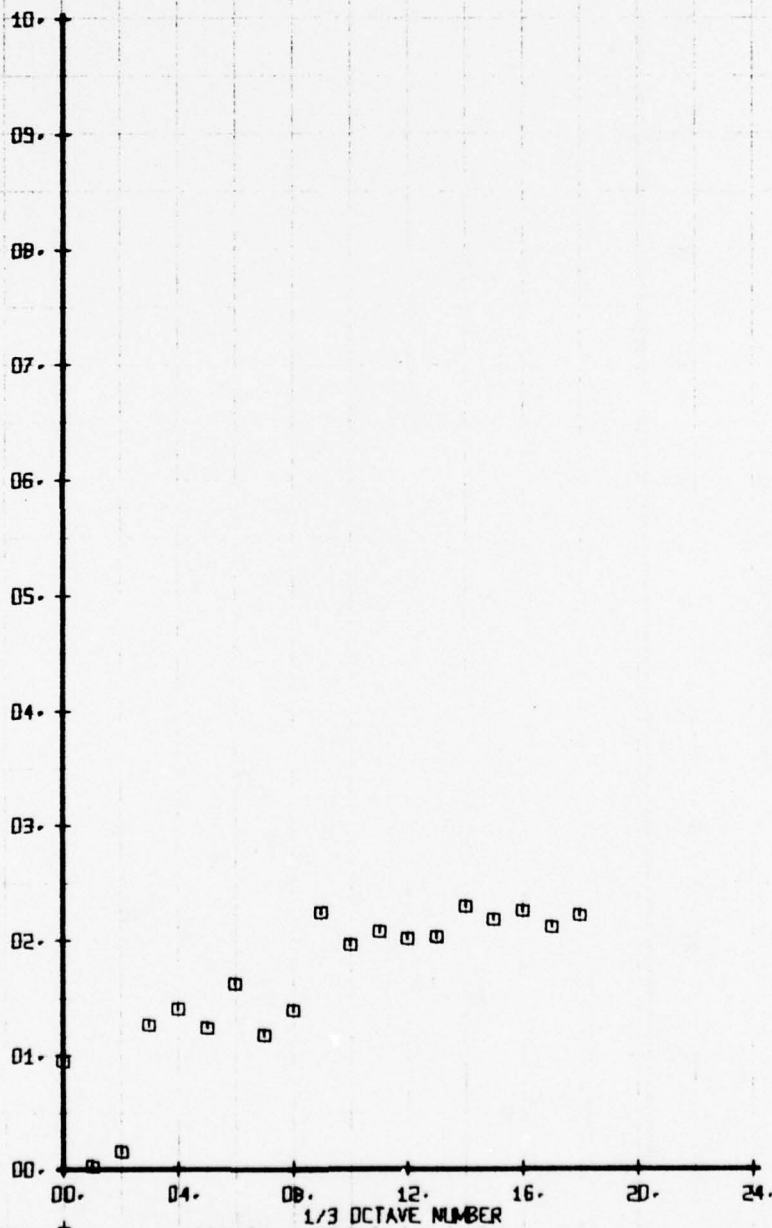
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE RT. OF STAB.
 RUN 119 TP 0

SYM
 □

CH
 71

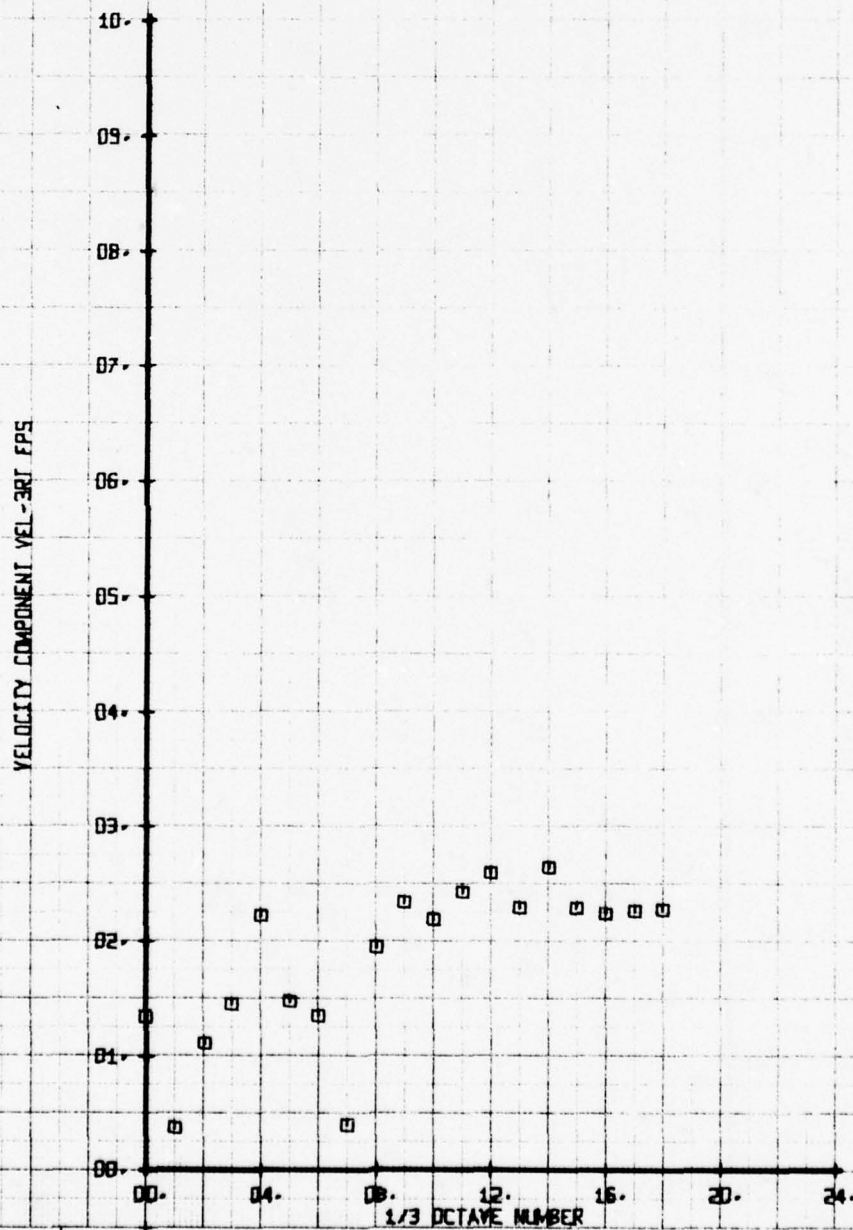
LEGEND
 PARAMETER
 VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS



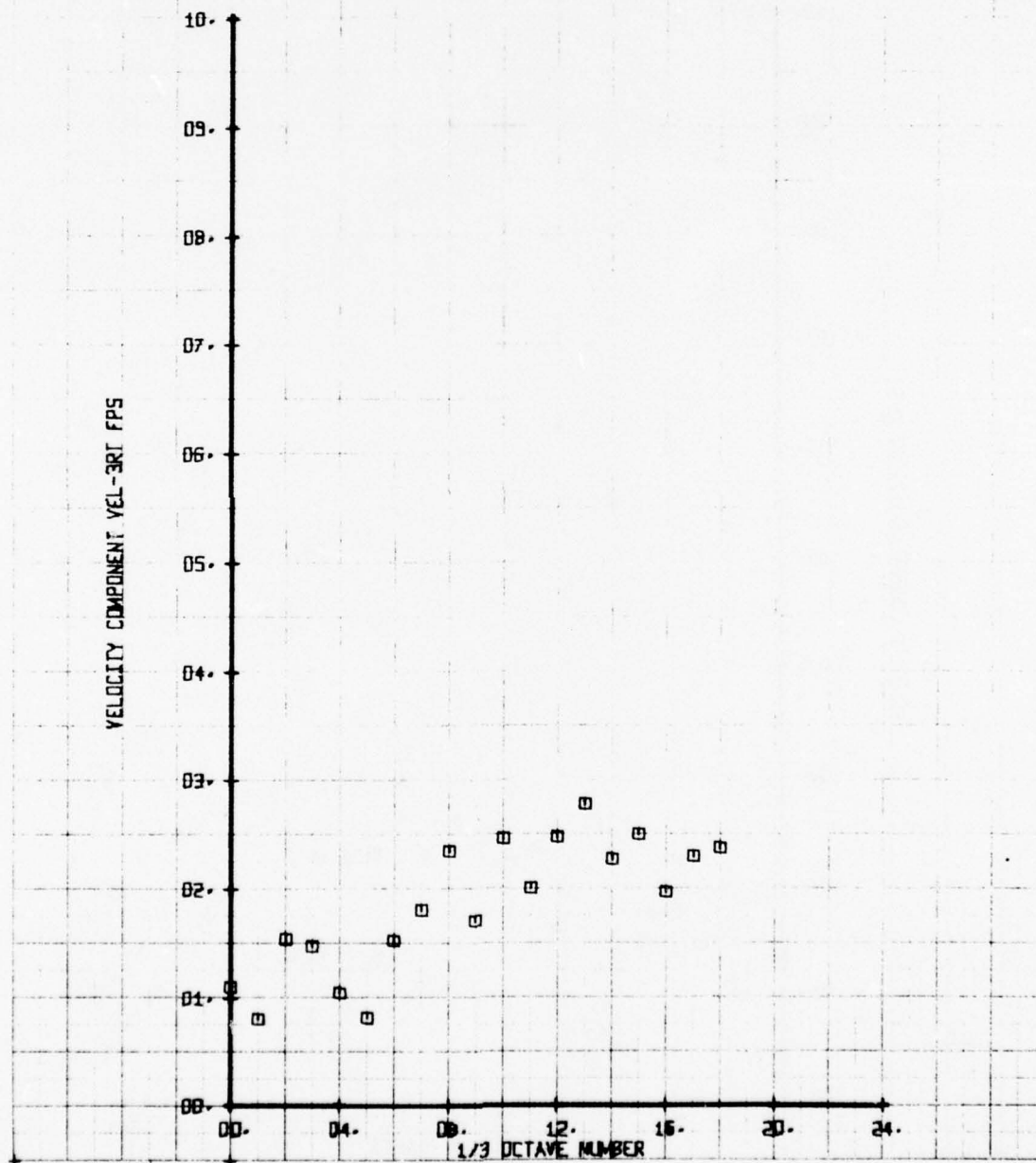
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE RT. OF STAB.
 RUN 119 TP 9

LEGEND
 SYM CH PARAMETER
 □ 71 VEL-3RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE RT. OF STAB.
 RUN 119 TP 12

LEGEND
 SYM CH PARAMETER
 □ 71 VEL-3RT



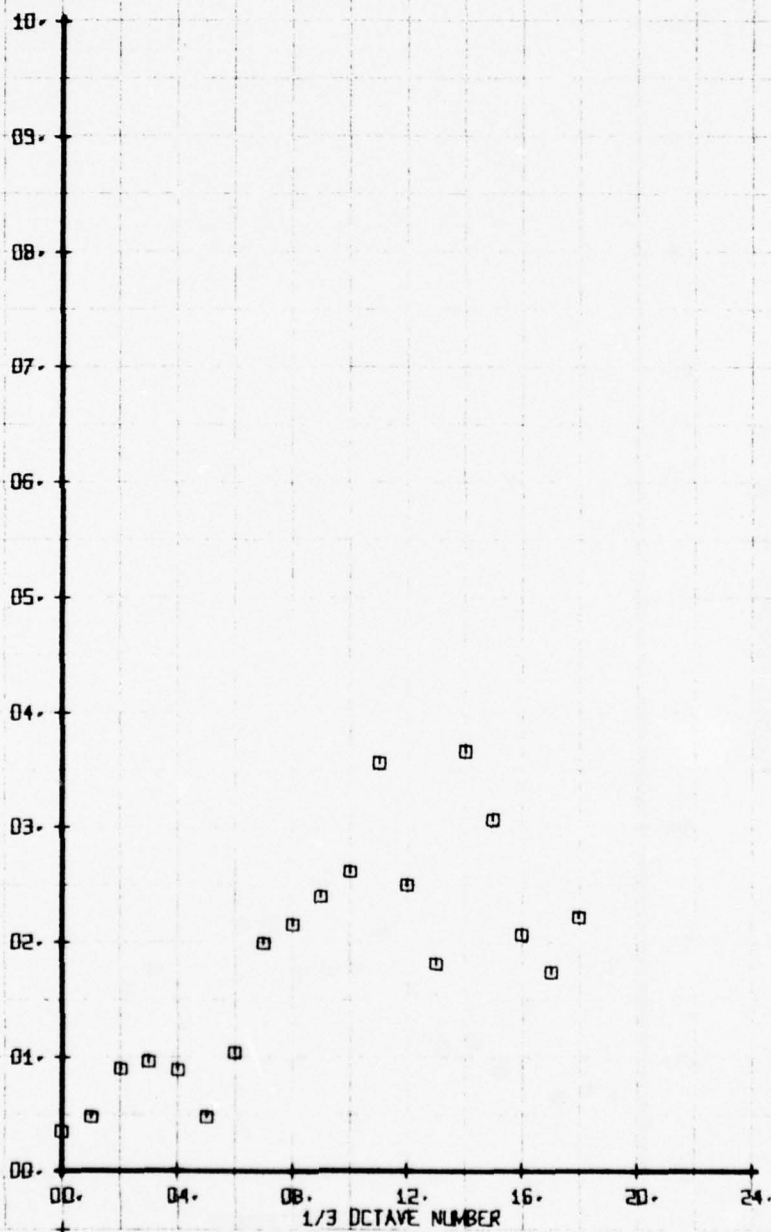
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE RT. OF STAB.
RUN 119 TP 14

SYM
□

CH
71

LEGEND
PARAMETER
VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS

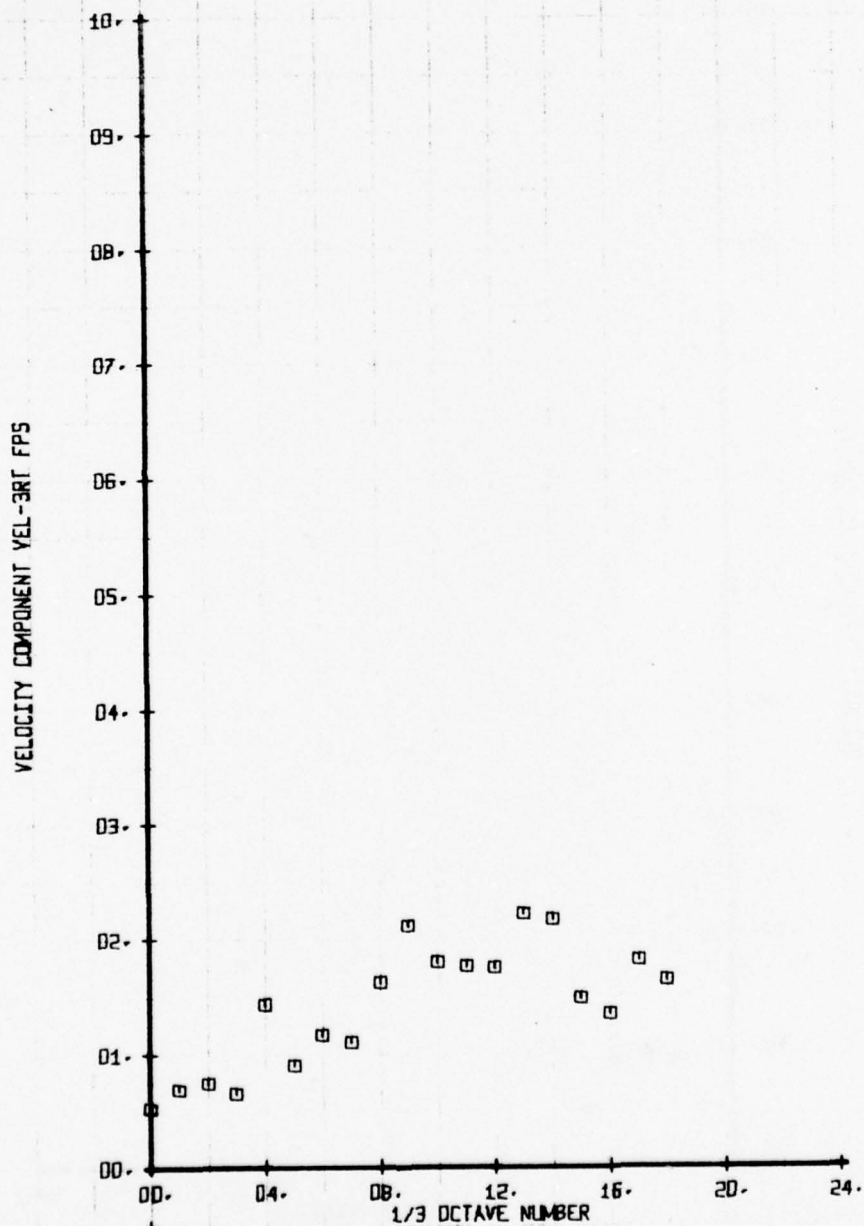


HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE RT. OF STAB.
 RUN 119 TP 16

SYM
 □

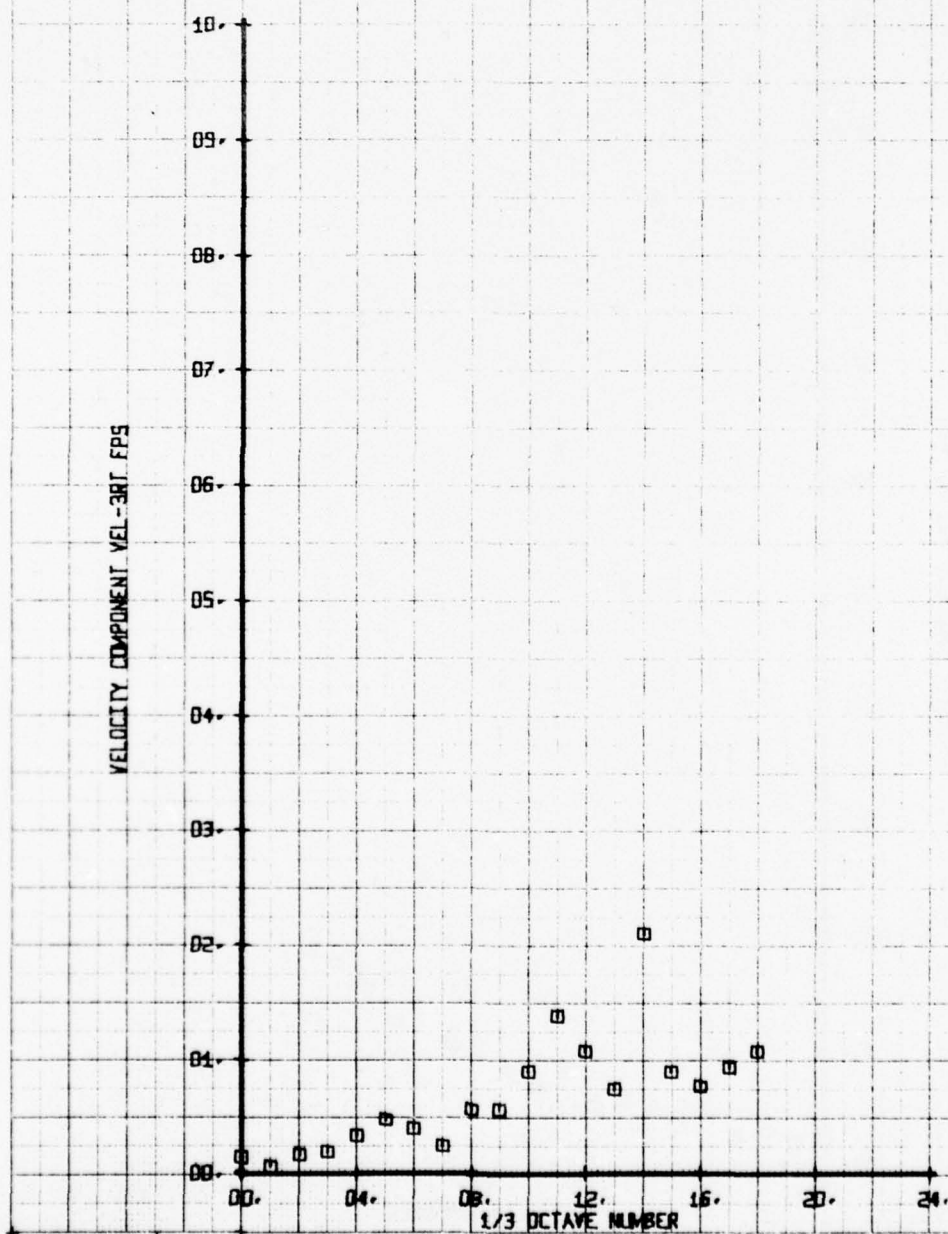
CH
 71

LEGEND
 PARAMETER
 VEL-3RT



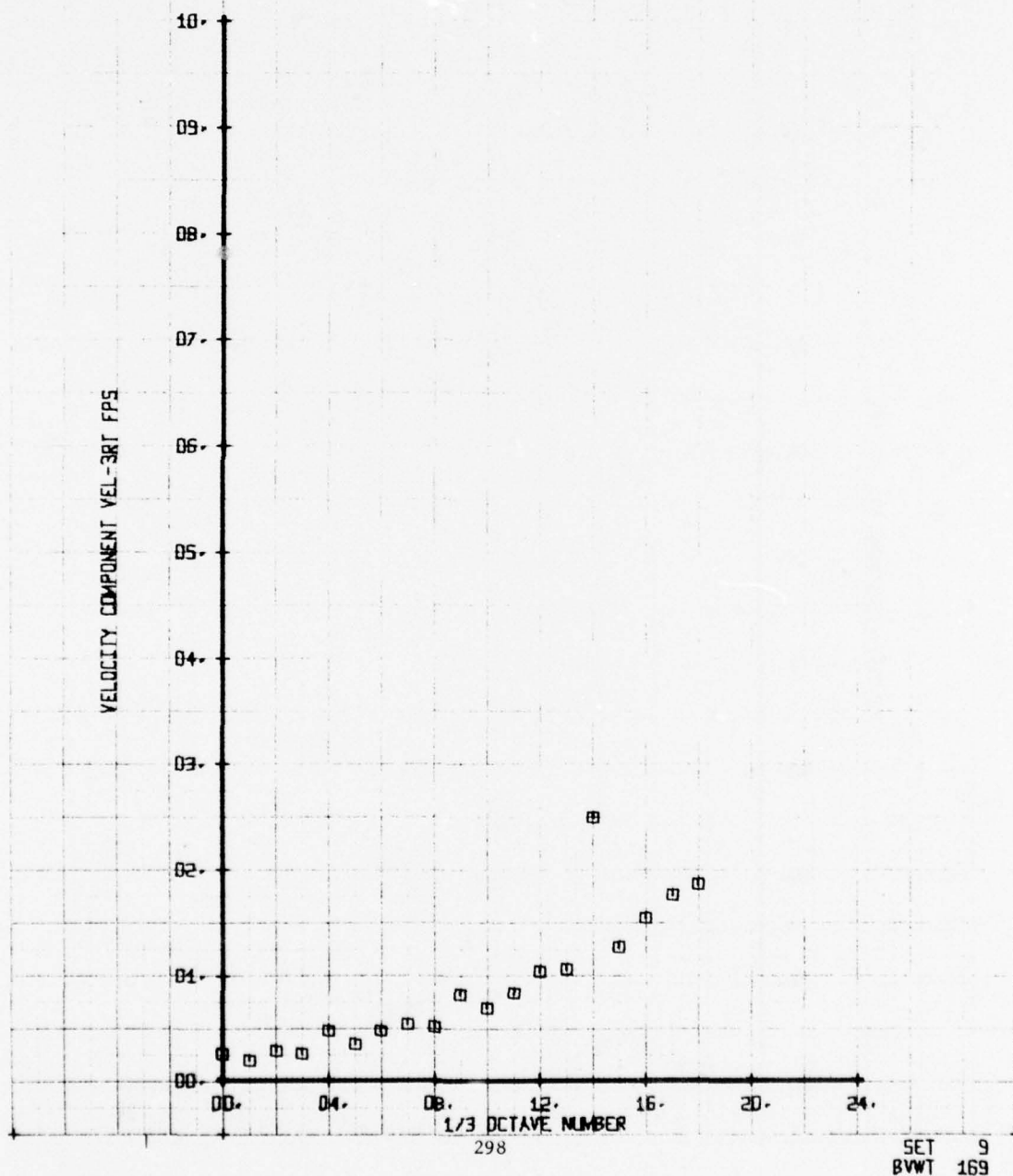
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE RT. OF STAB.
 RUN 119 TP 20

SYM CH PARAMETER
 □ 71 VEL-3RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE RT. OF STAB.
 RUN 119 TP 25

LEGEND
 SYM CH PARAMETER
 □ 71 VEL-3RT

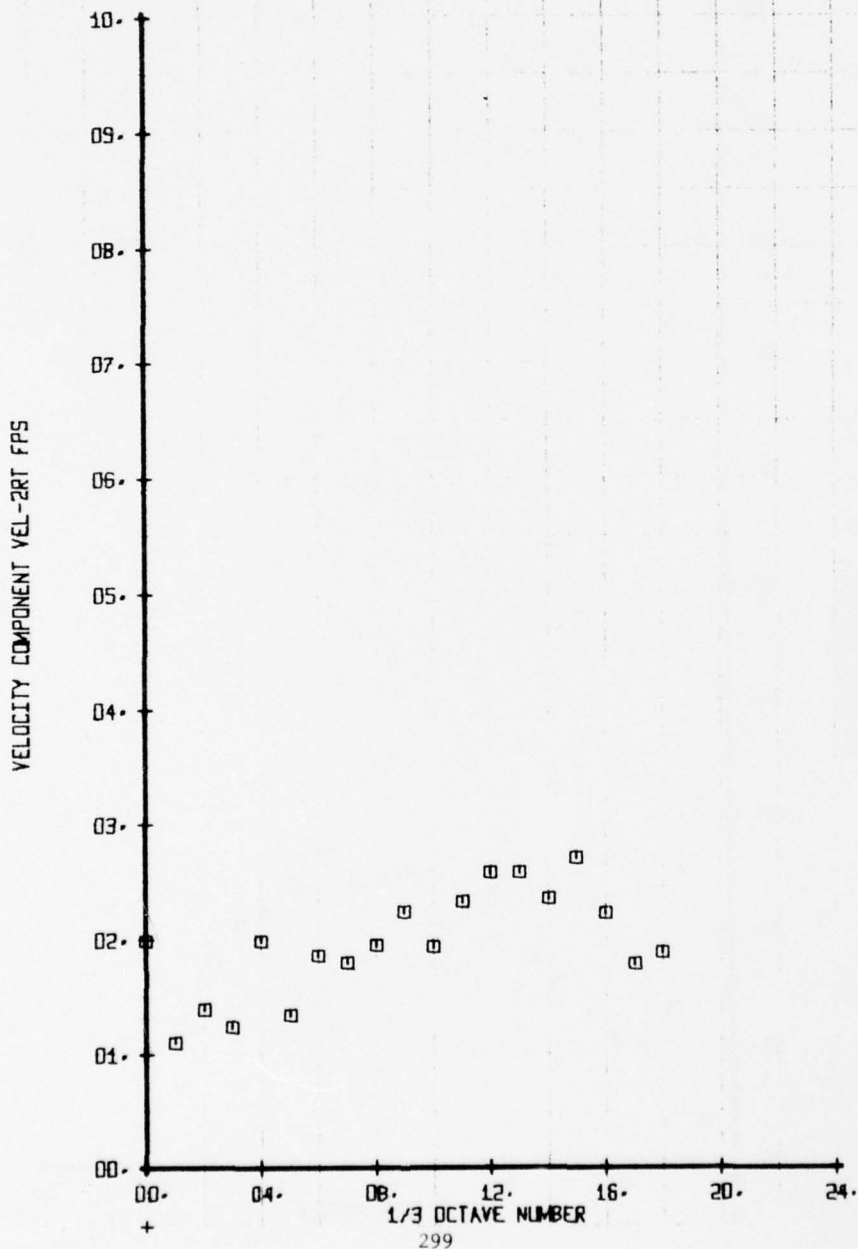


HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE RT. OF STAB.
 RUN 119 TP 2

SYM
 □

CH
 75

LEGEND
 PARAMETER
 VEL-2RT

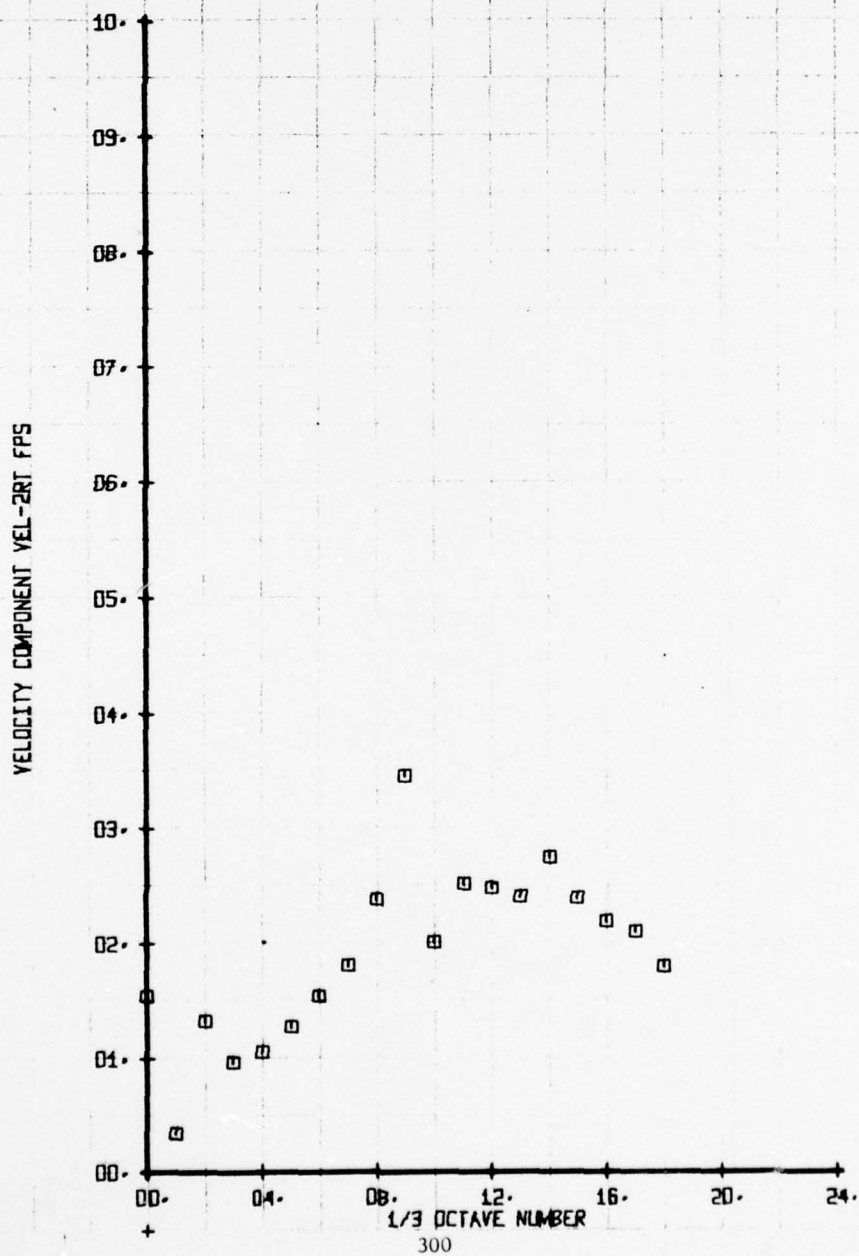


ET 9 +
 WT 169

SET 9 +
 BVWT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE RT. OF STAB.
 RUN 119 TP 5

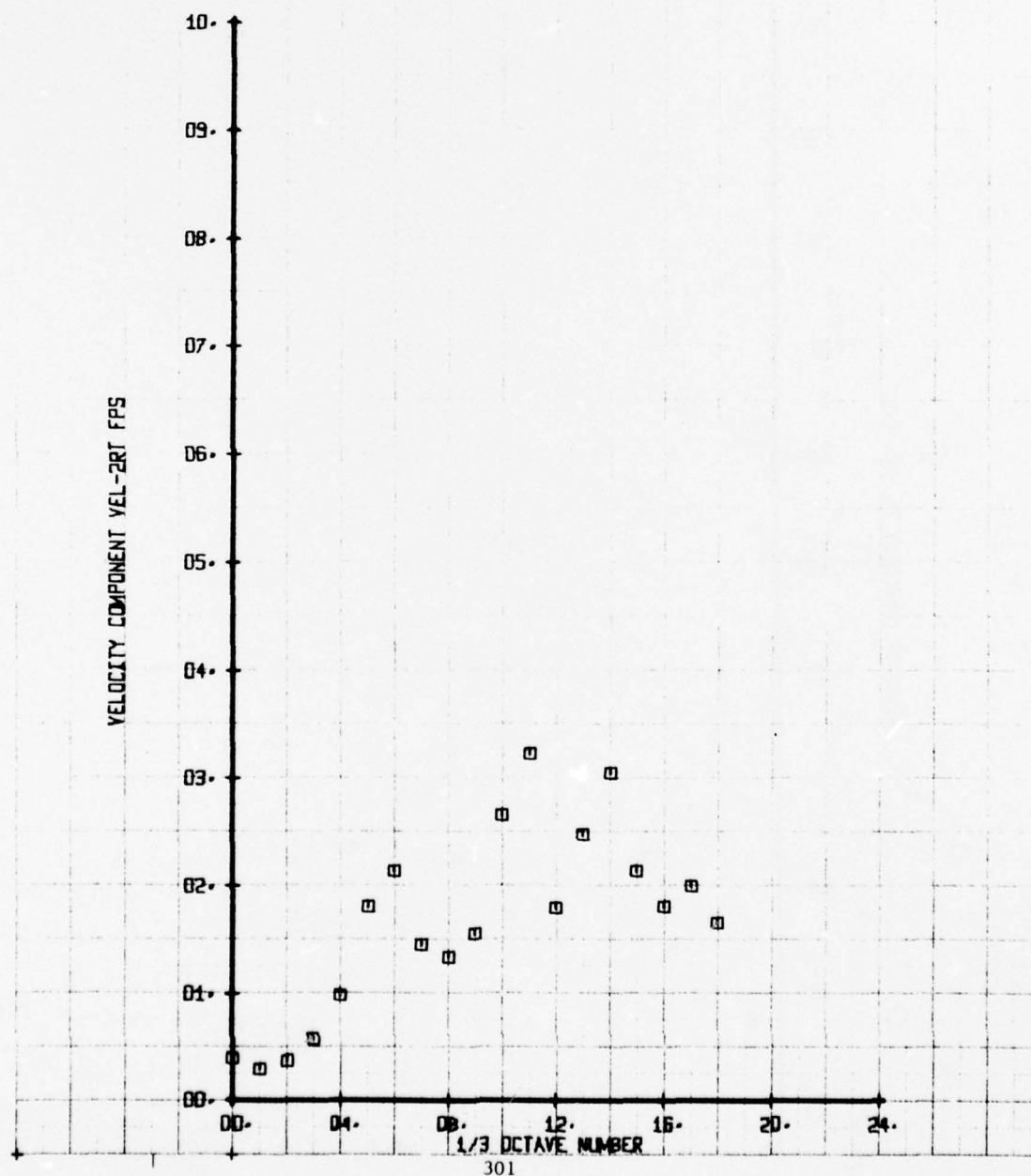
SYN CH PARAMETER
 0 75 VEL-2RT



ET 9 +
 WT 169

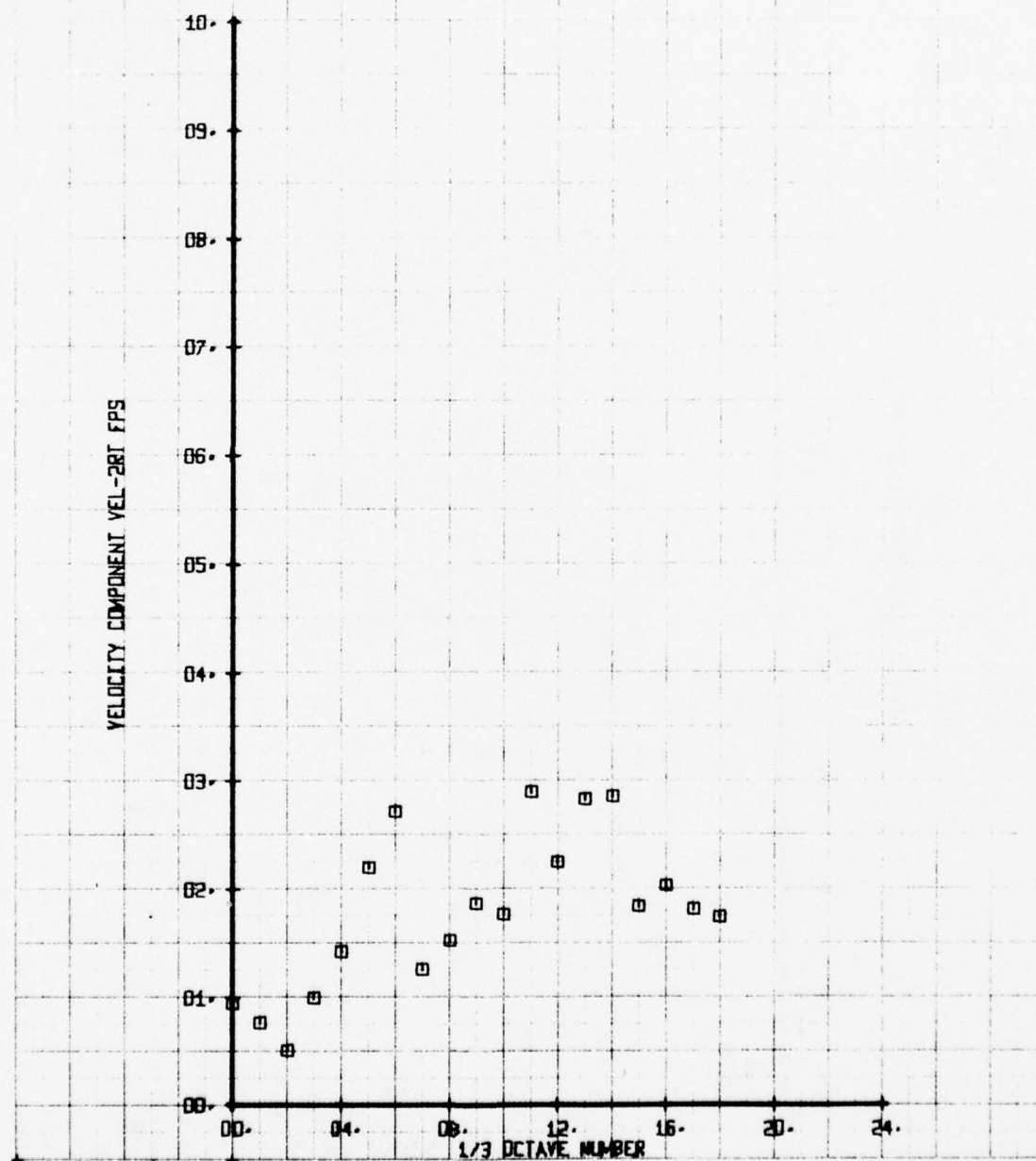
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE RT. OF STAB.
RUN 119 TP 8

LEGEND
SYM CH PARAMETER
□ 75 VEL-2RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE RT. OF STAB.
RUN 119 TP 9

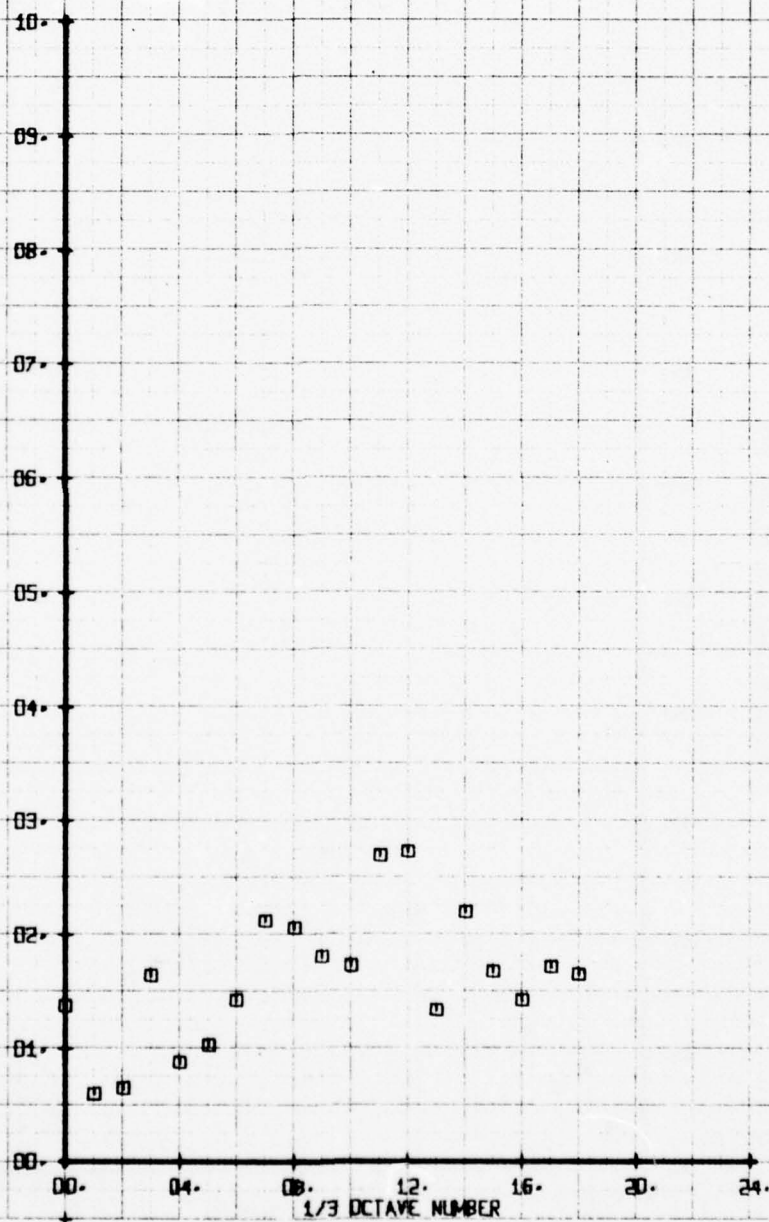
LEGEND
SYM CH PARAMETER
□ 75 VEL-2RT



HOT FILM WARE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE RT. OF STAB.
 RUN 119 TP 12

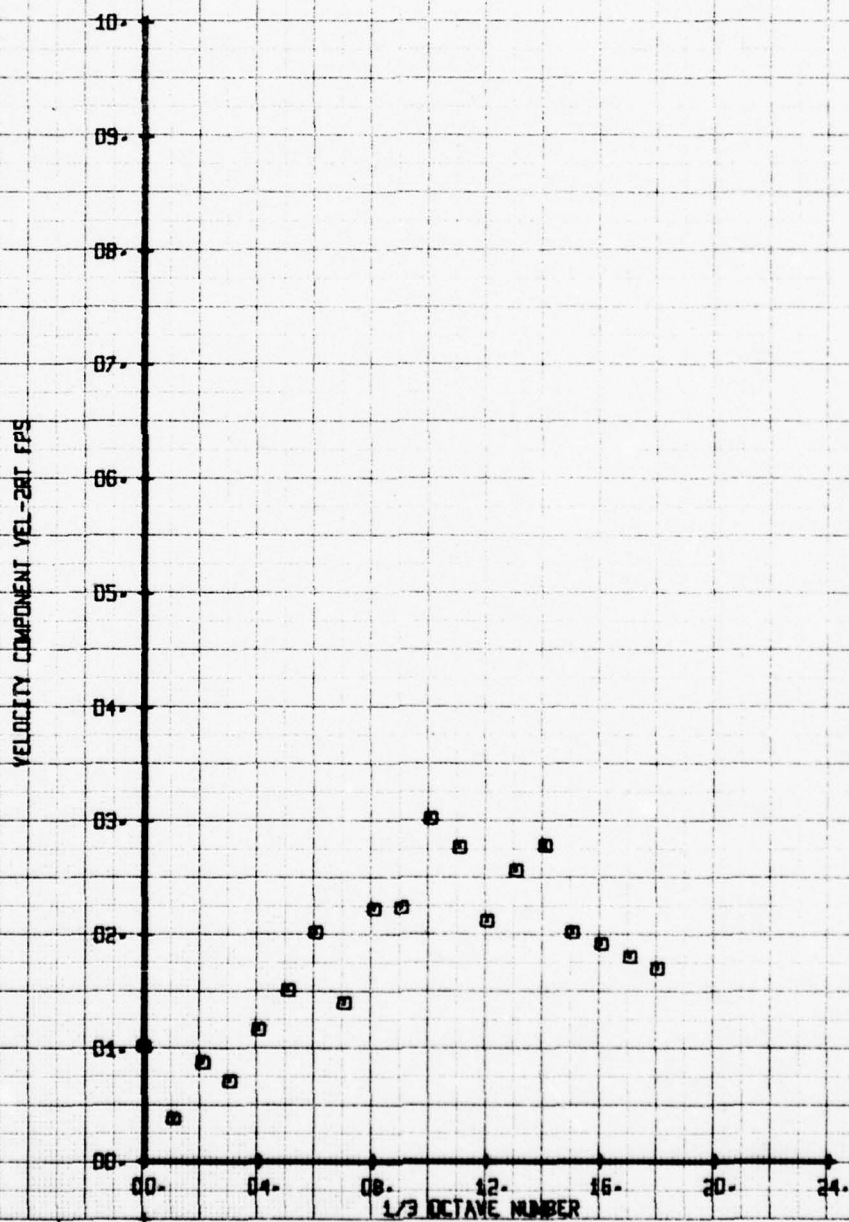
SYM	CH	PARAMETER
□	75	VEL-2RT

VELOCITY COMPONENT VEL-2RT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE RT. OF STAB.
 RUN 119 TP 14

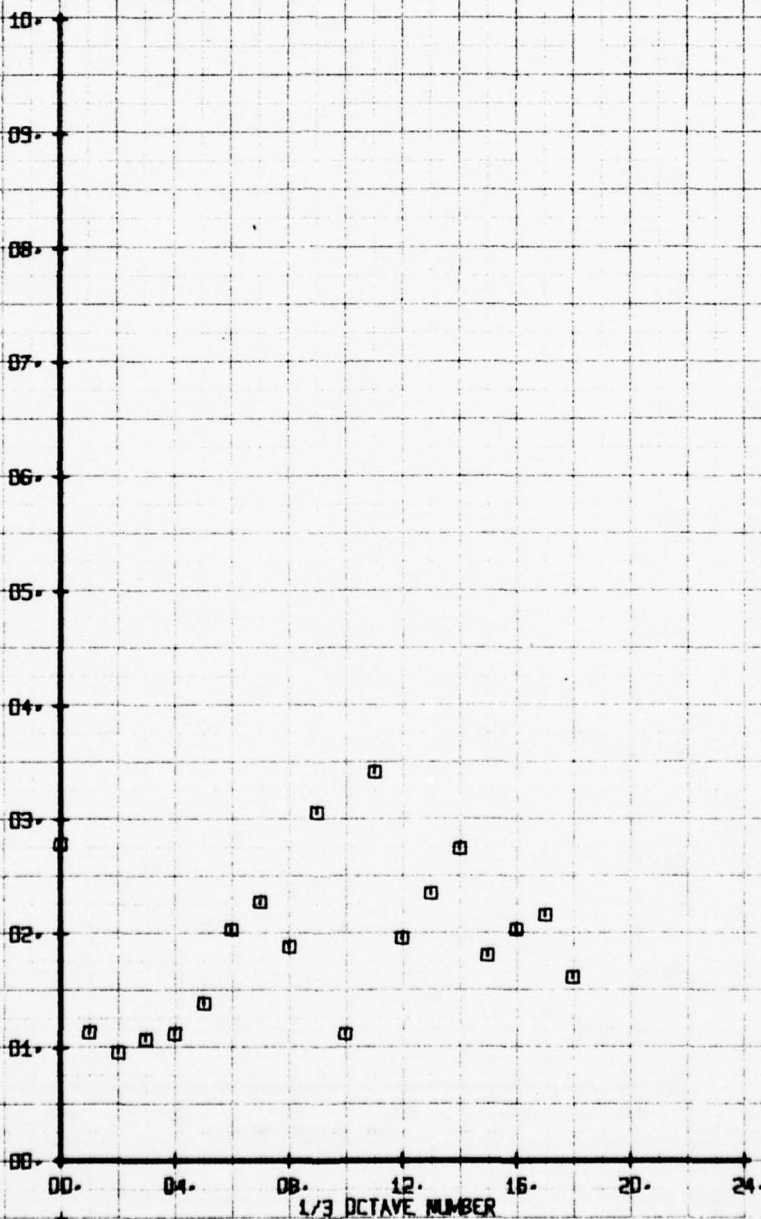
LEGEND
 SYM CH PARAMETER
 □ 75 VEL-2RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE RT. OF STAB.
 RUN 119 TP 16

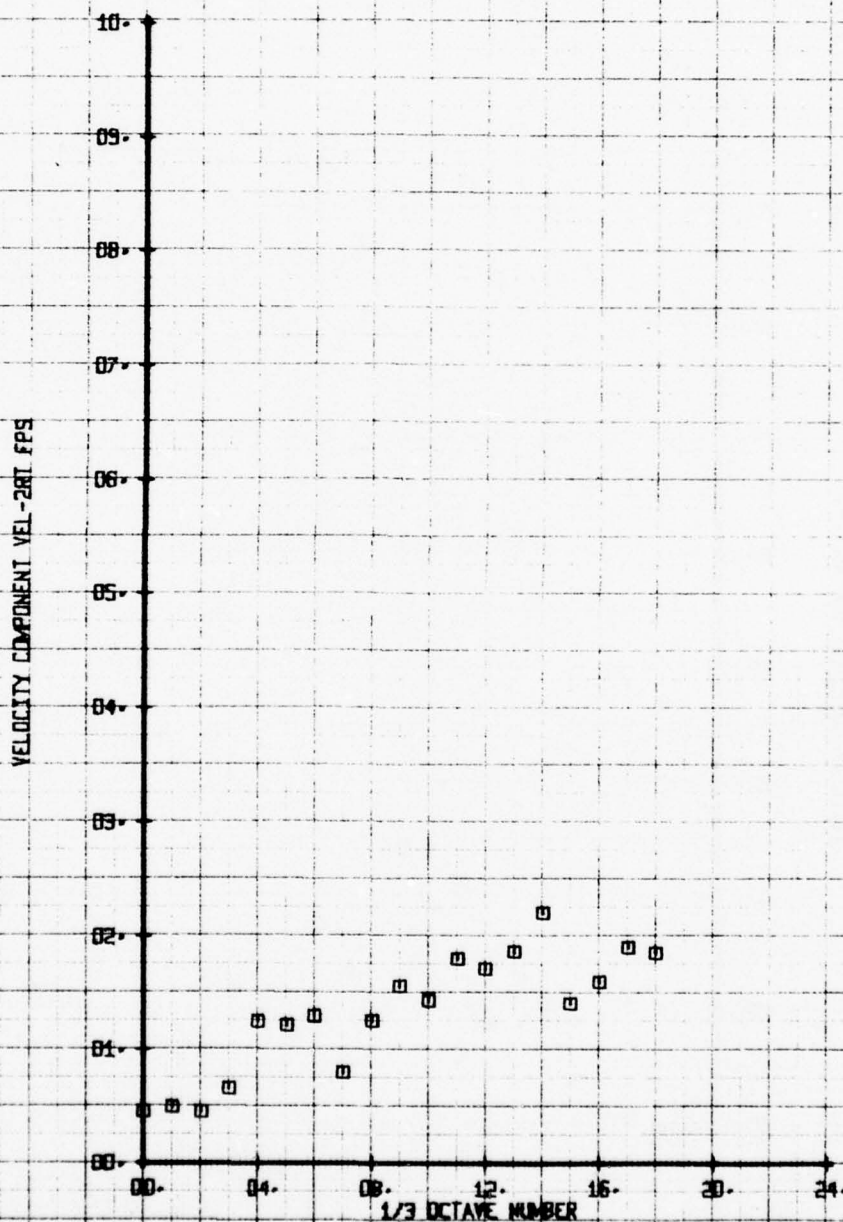
SYM	CH	PARAMETER
□	75	VEL-2RT

VELOCITY COMPONENT VEL-2RT FPM



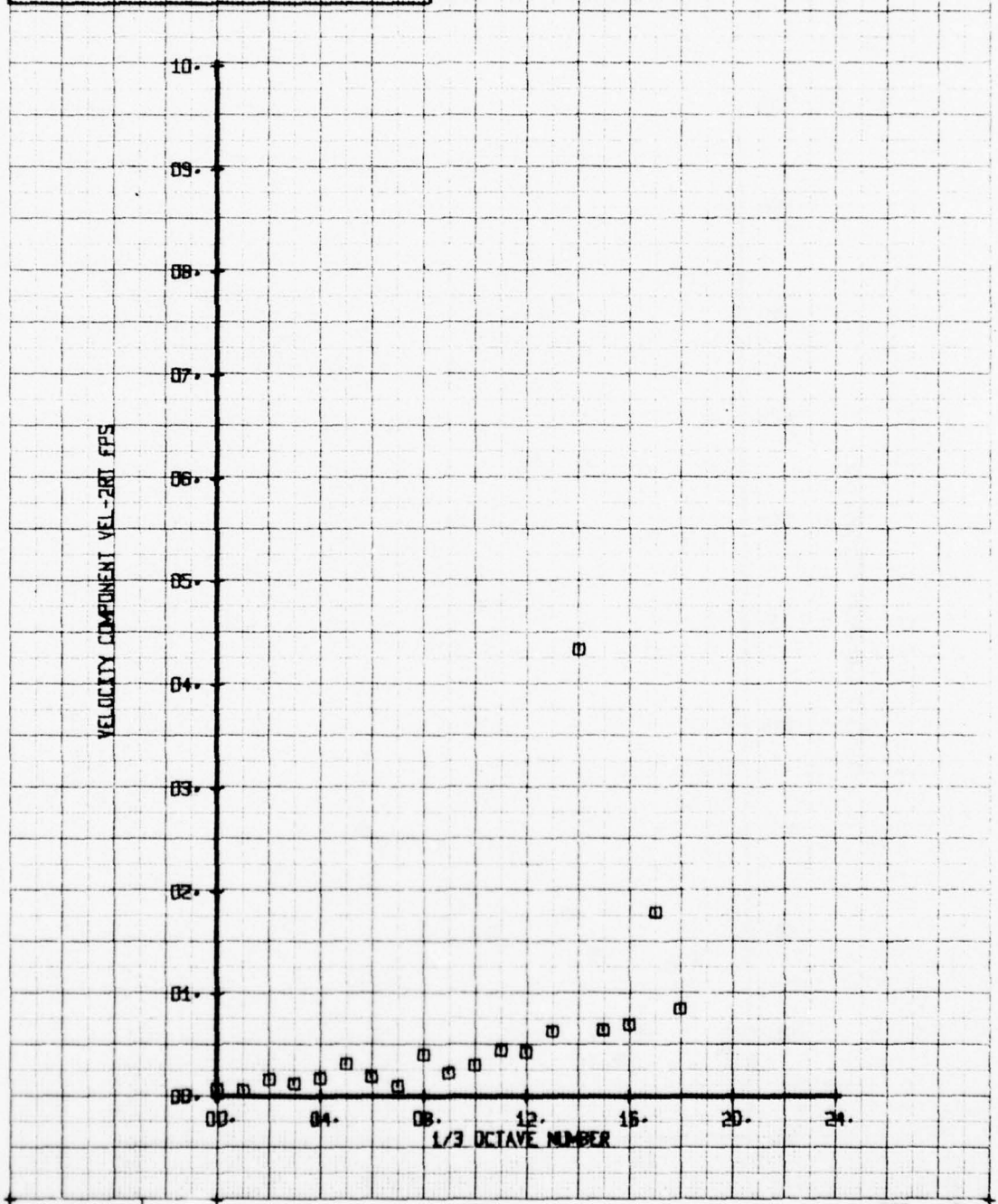
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE RT. OF STAB.
 RUN 119 TP 20

LEGEND		
SYM	CH	PARAMETER
□	75	VEL-2RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE RT. OF STAB.
 RUN 119 TP 25

SYM	CH	PARAMETER
□	75	VEL-2RT



ET 9
 WT 169

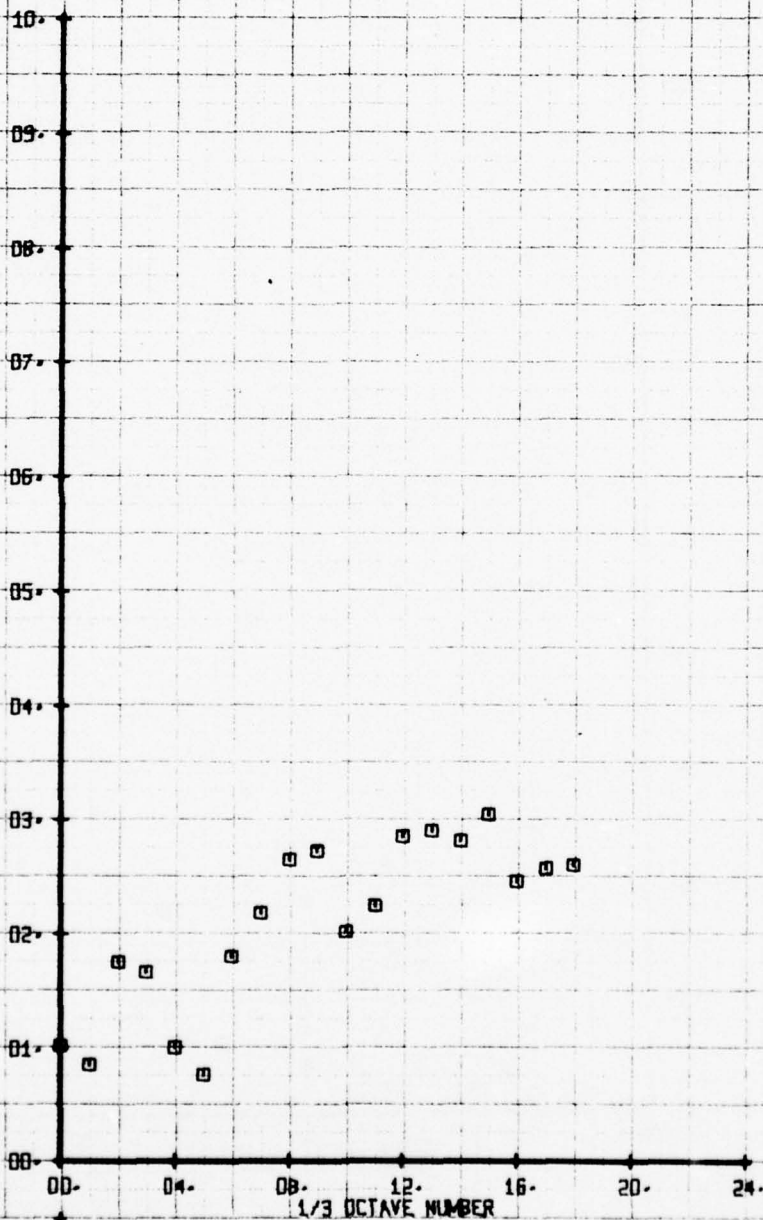
307

SET 9
 BVWT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE RT. OF STAB.
 RUN 119 TP 2

SYN CH PARAMETER
 □ 74 VEL-1RT

VELOCITY COMPONENT VEL-1RT FPS



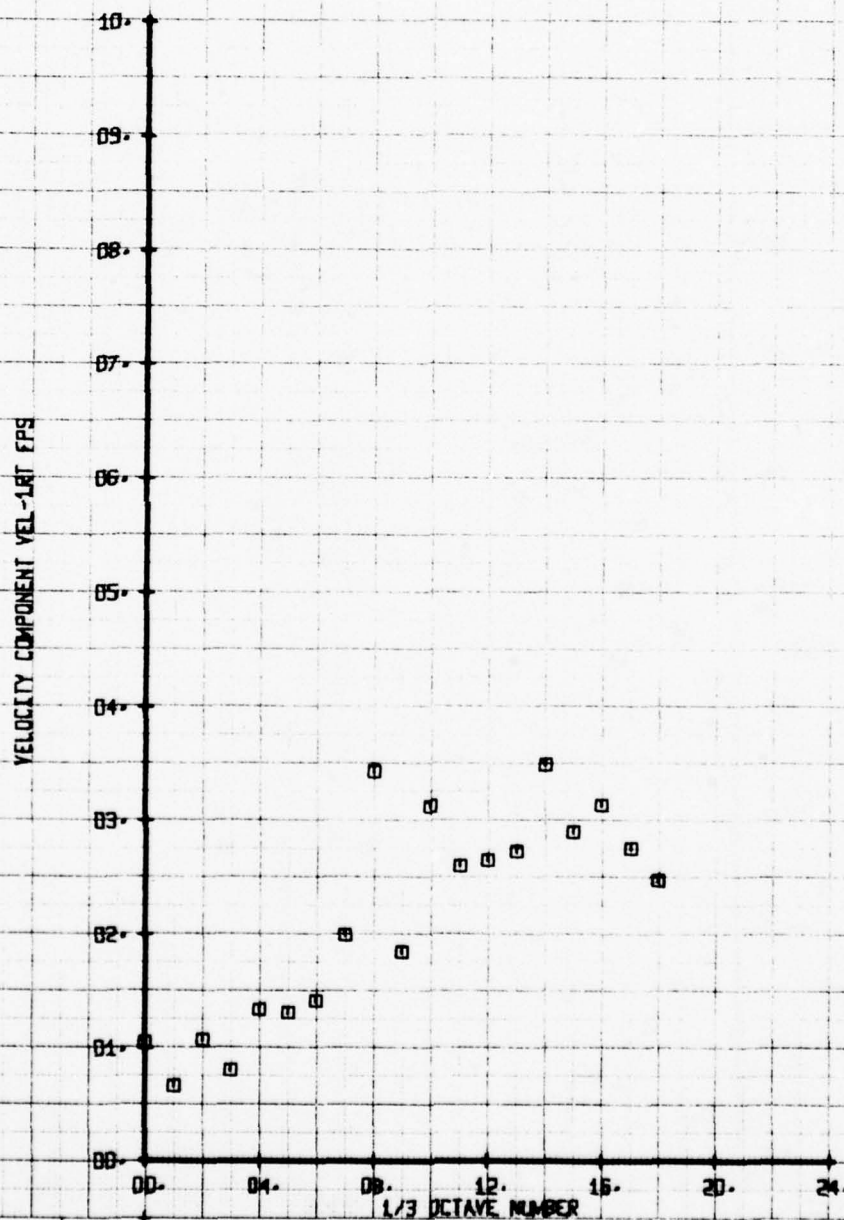
ET 9
 WT 169

308

SET 9
 BVWT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE RT. OF STAB.
 RUN 119 TP 5

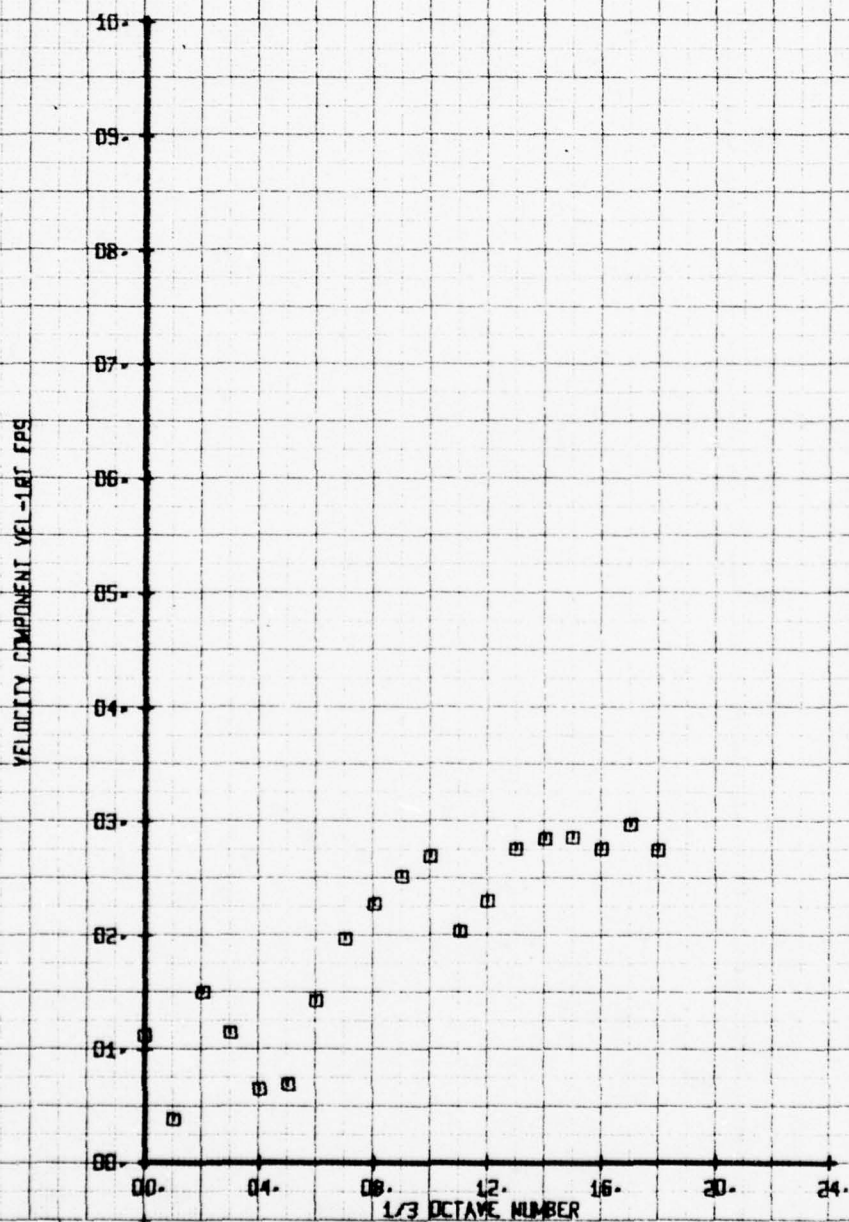
SYN CH PARAMETER
 □ 74 VEL-1RT



ET 9
 WT 169

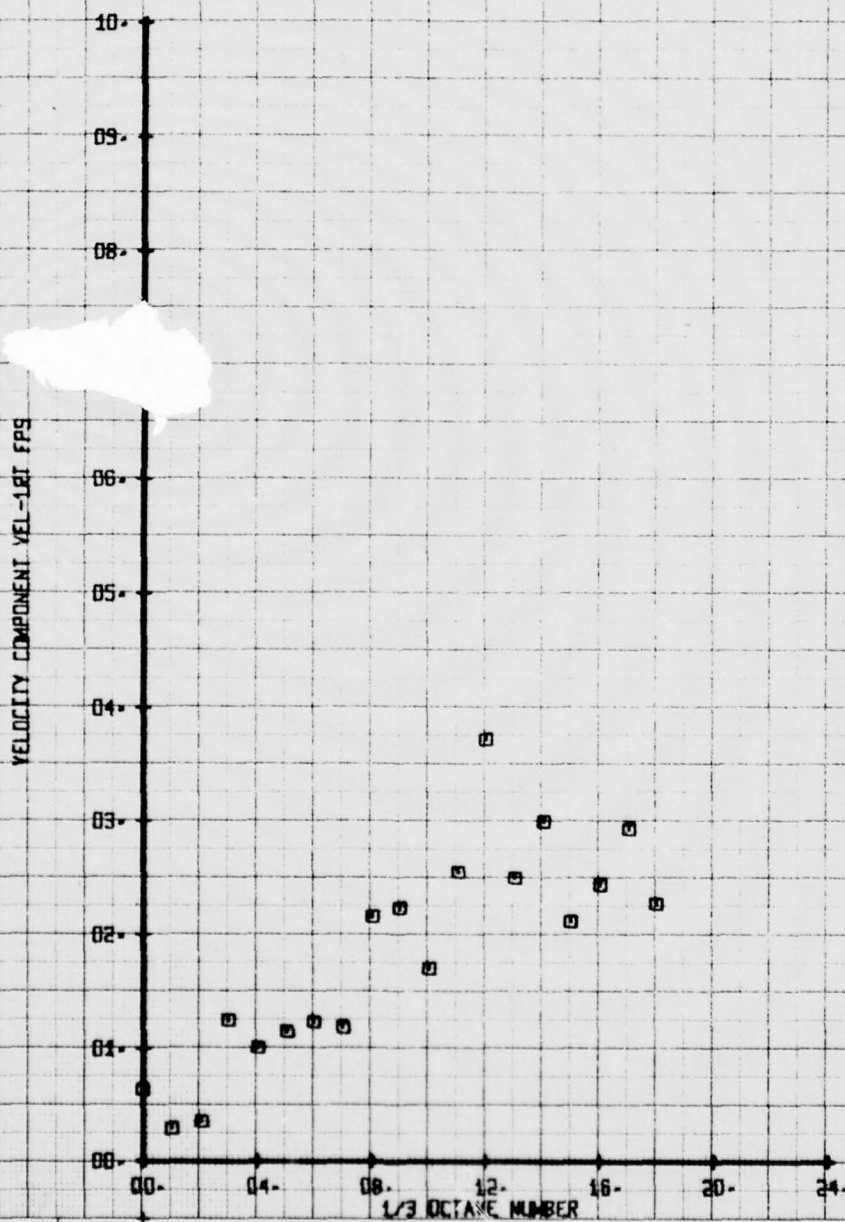
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE RT. OF STAB.
 RUN 119 TP B

LEGEND
 CH 74
 PARAMETER
 VEL-1RT



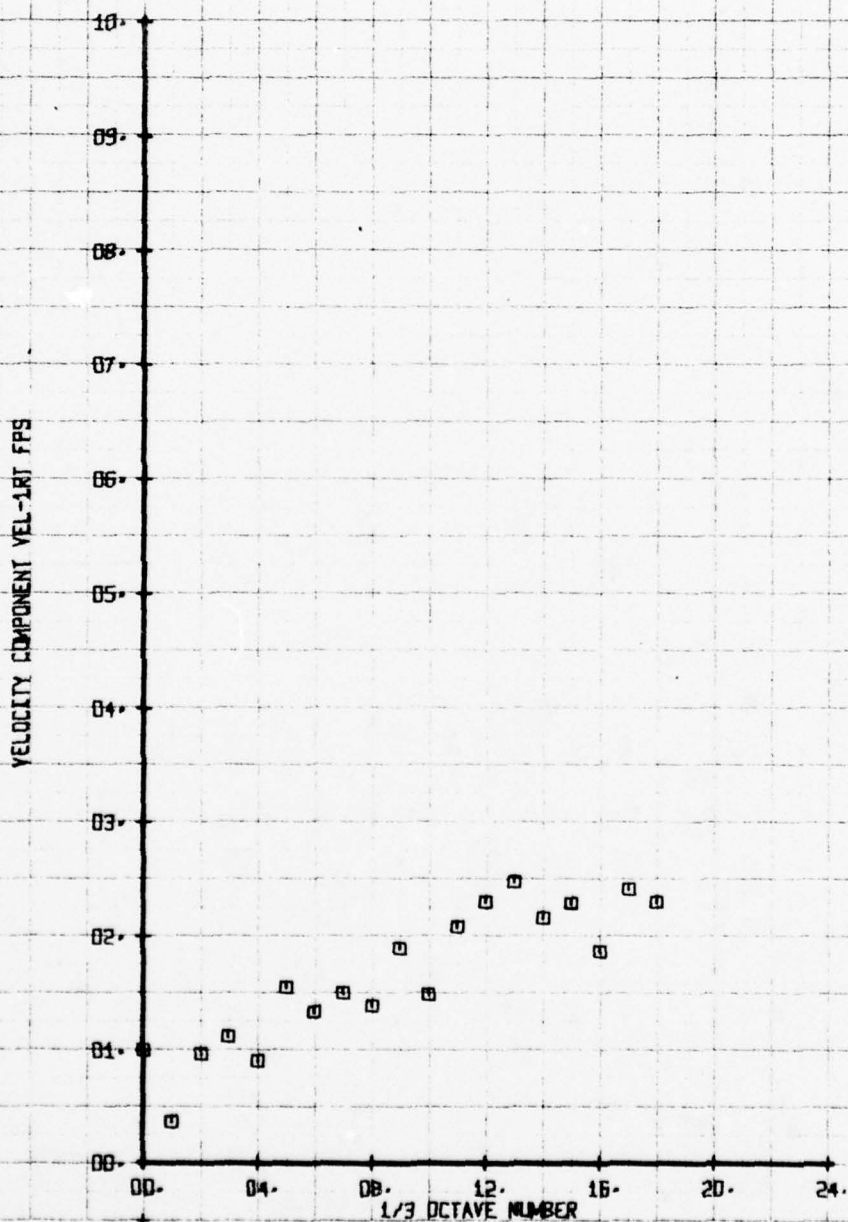
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE RT. OF STAB.
 RUN 119 TP 9

SYM	CH	PARAMETER
□	74	VEL-1RT



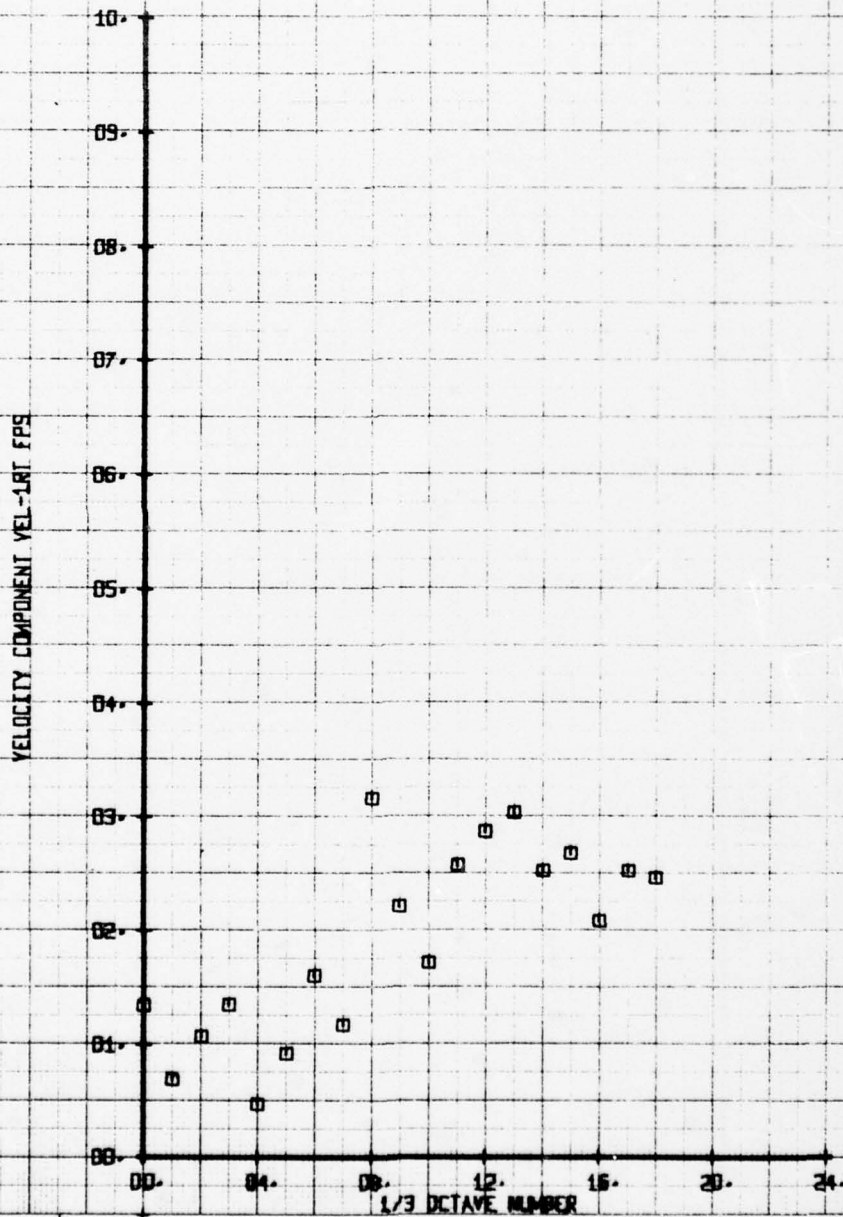
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE RT. OF STAB.
RUN 119 TP 12

SYN CH PARAMETER
□ 74 VEL-1RT



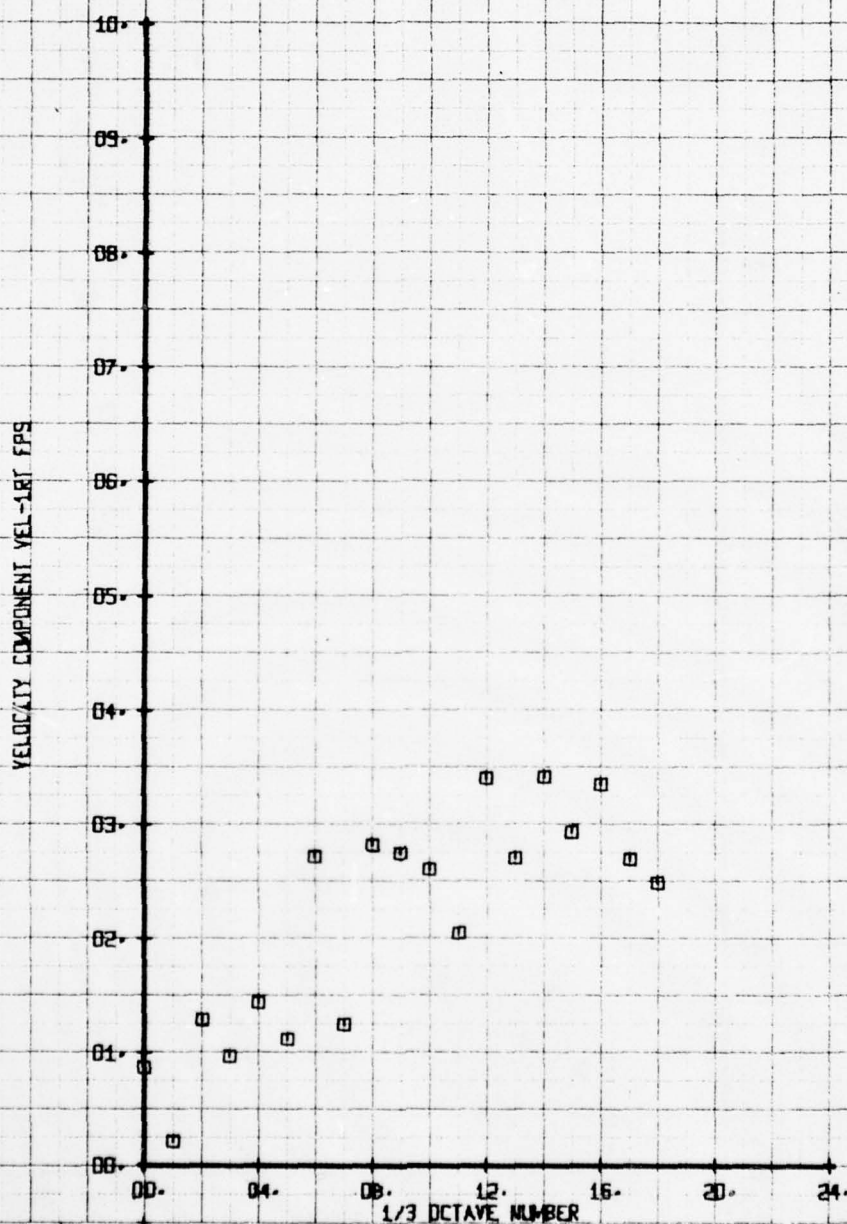
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE RT. OF STAB.
 RUN 119 TP 14

LEGEND		
SYM	CH	PARAMETER
□	74	VEL-1RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRANSVERSE RT. OF STAB.
 RUN 119 TP 16

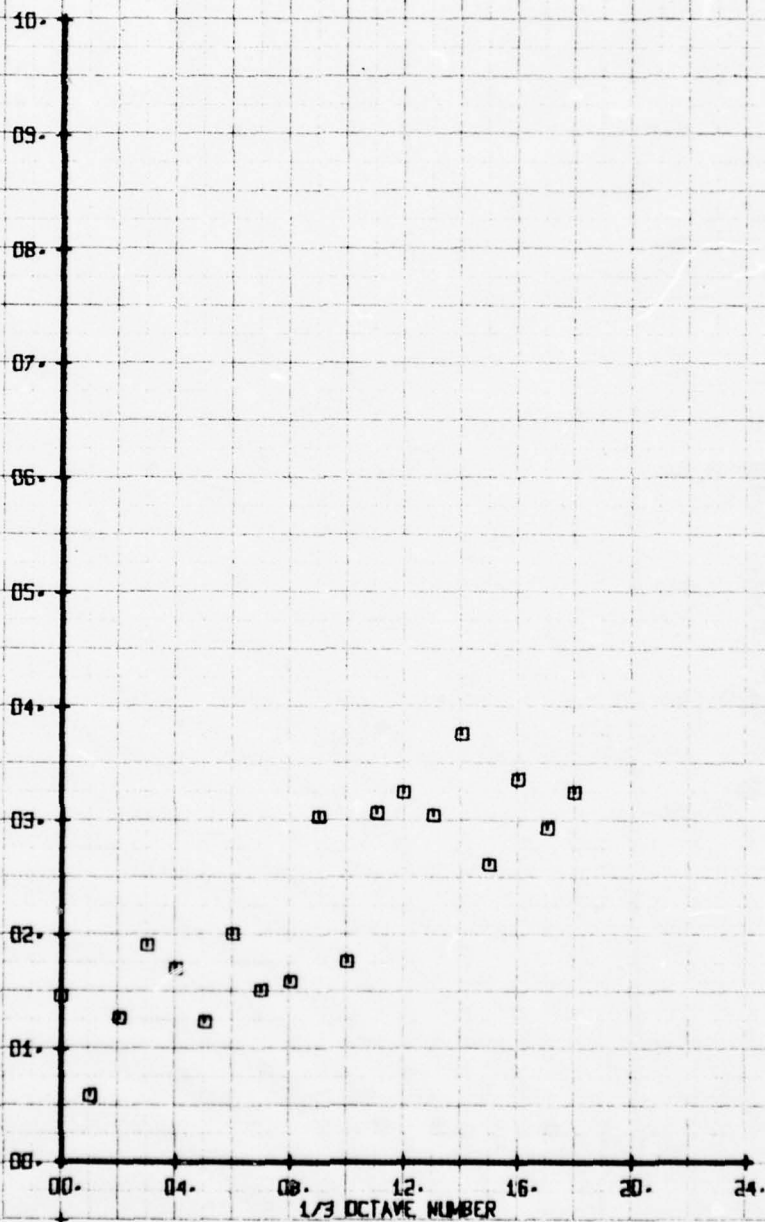
SYM	CH	LEGEND	PARAMETER
□	74		VEL-1RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE RT. OF STAB.
RUN 119 TP 20

SYM	CH	PARAMETER
□	74	VEL-1RT

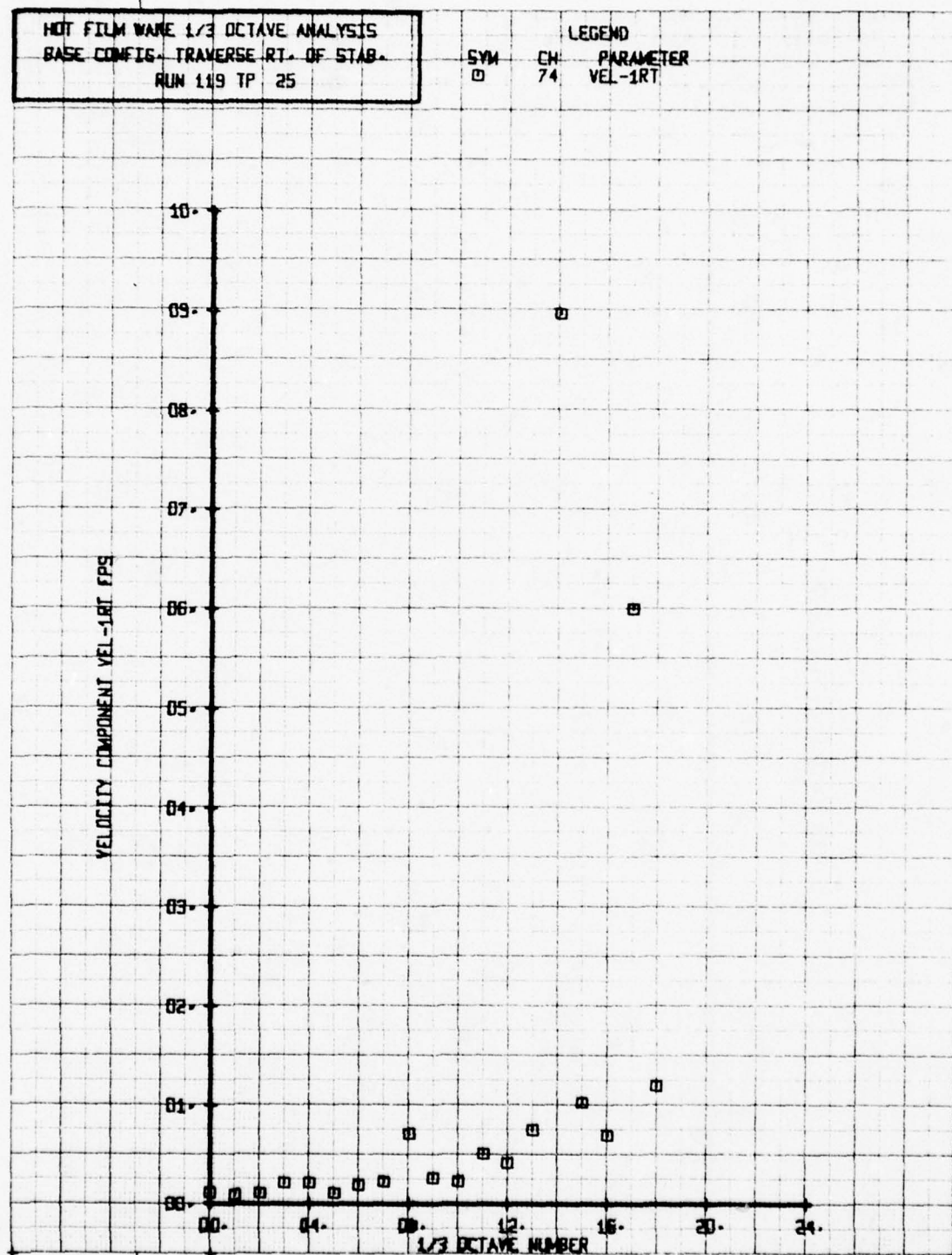
VELOCITY COMPONENT VEL-1RT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE RT. OF STAB.
 RUN 119 TP 25

LEGEND
 SYM CH PARAMETER
 □ 74 VEL-1RT

VELOCITY COMPONENT VEL-1RT FPS

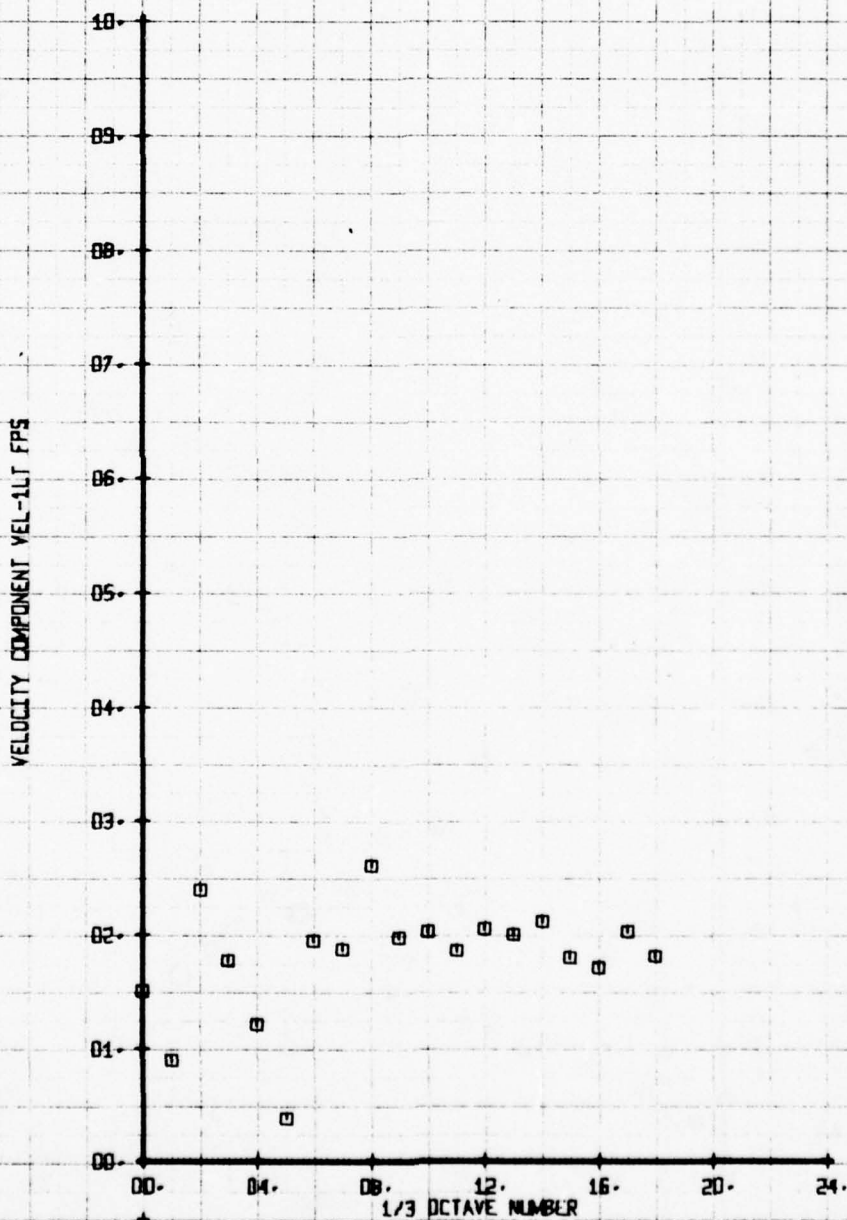


316

SET 9
 BVWT 169

HDT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE RT. OF STAB.
 RUN 119 TP 2

SYM	CH	LEGEND	PARAMETER
□	73		VEL-1LT

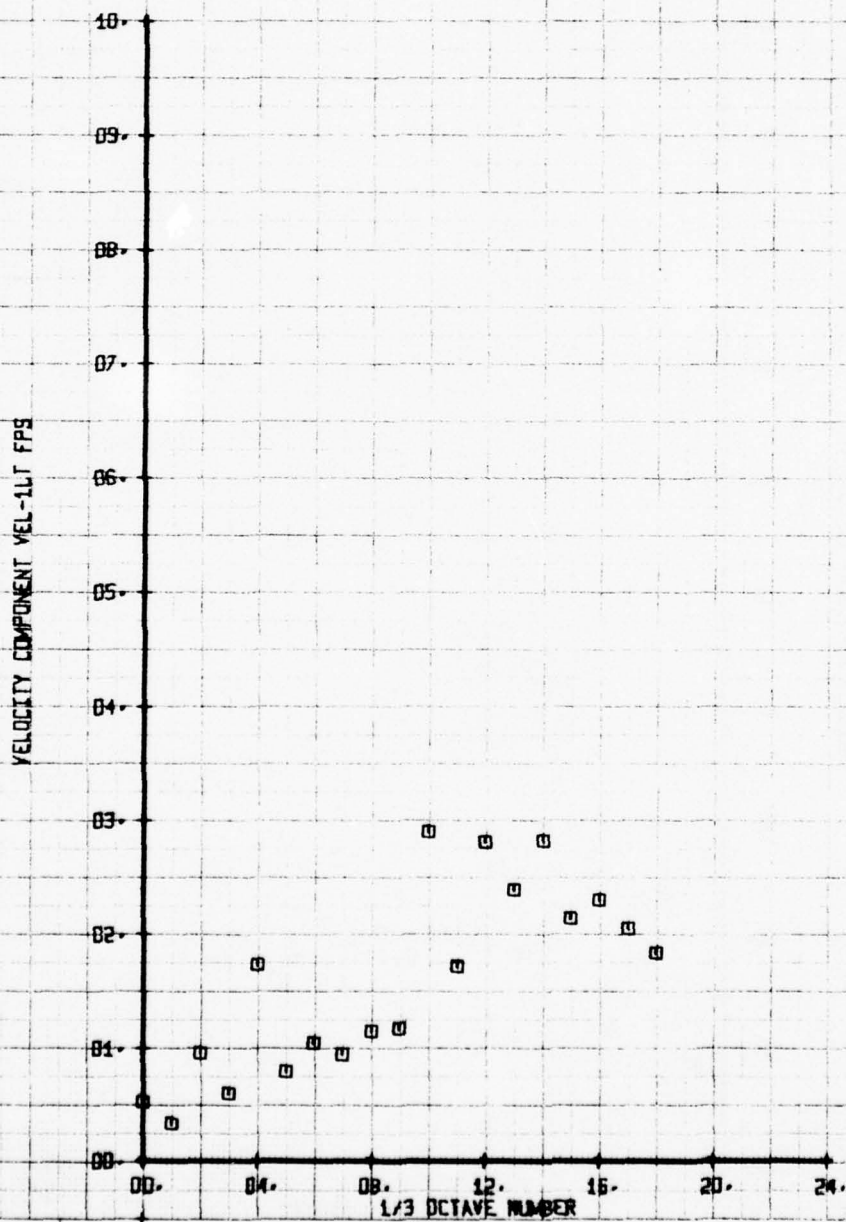


ET 9
 WT 169

SET 9
 BVWT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE RT. OF STAB.
 RUN 119 TP 5

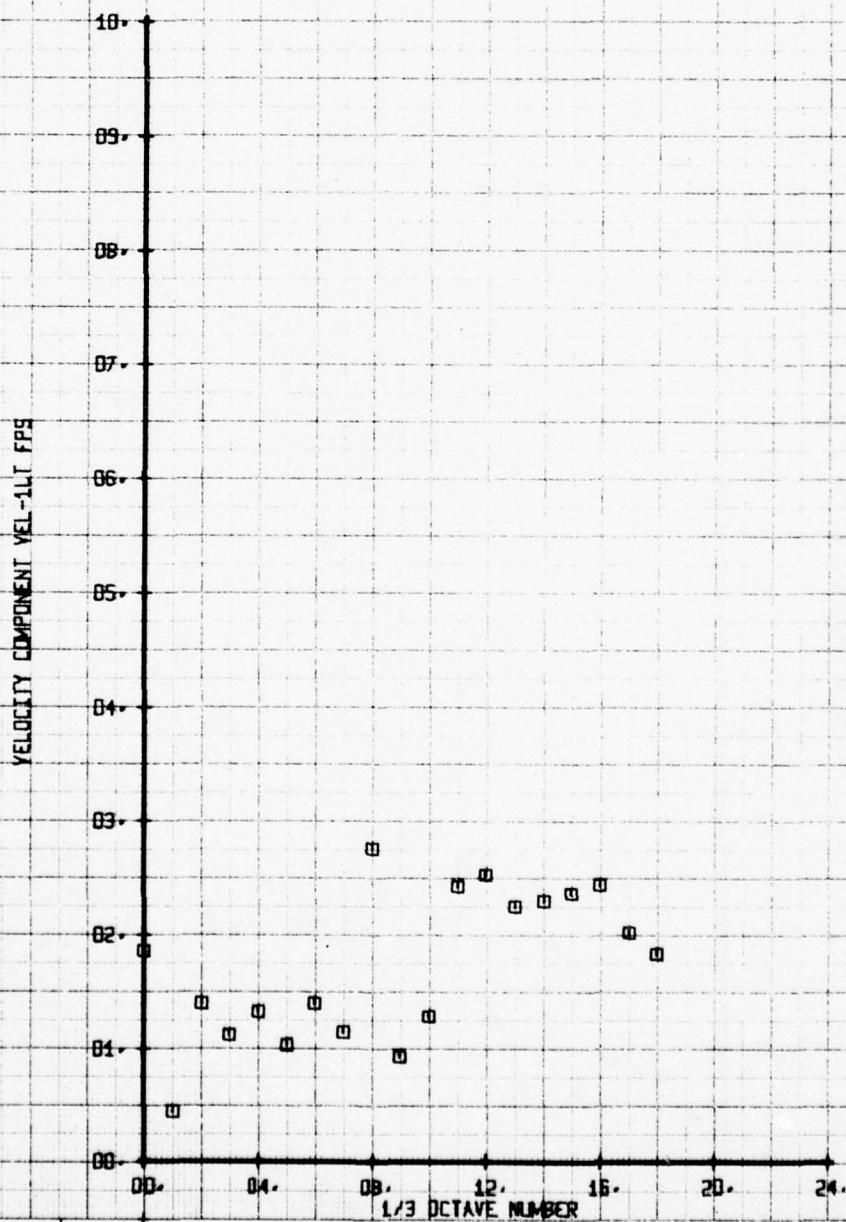
SYM	CH	PARAMETER
□	73	VEL-1LT



ET 9
 WT 169

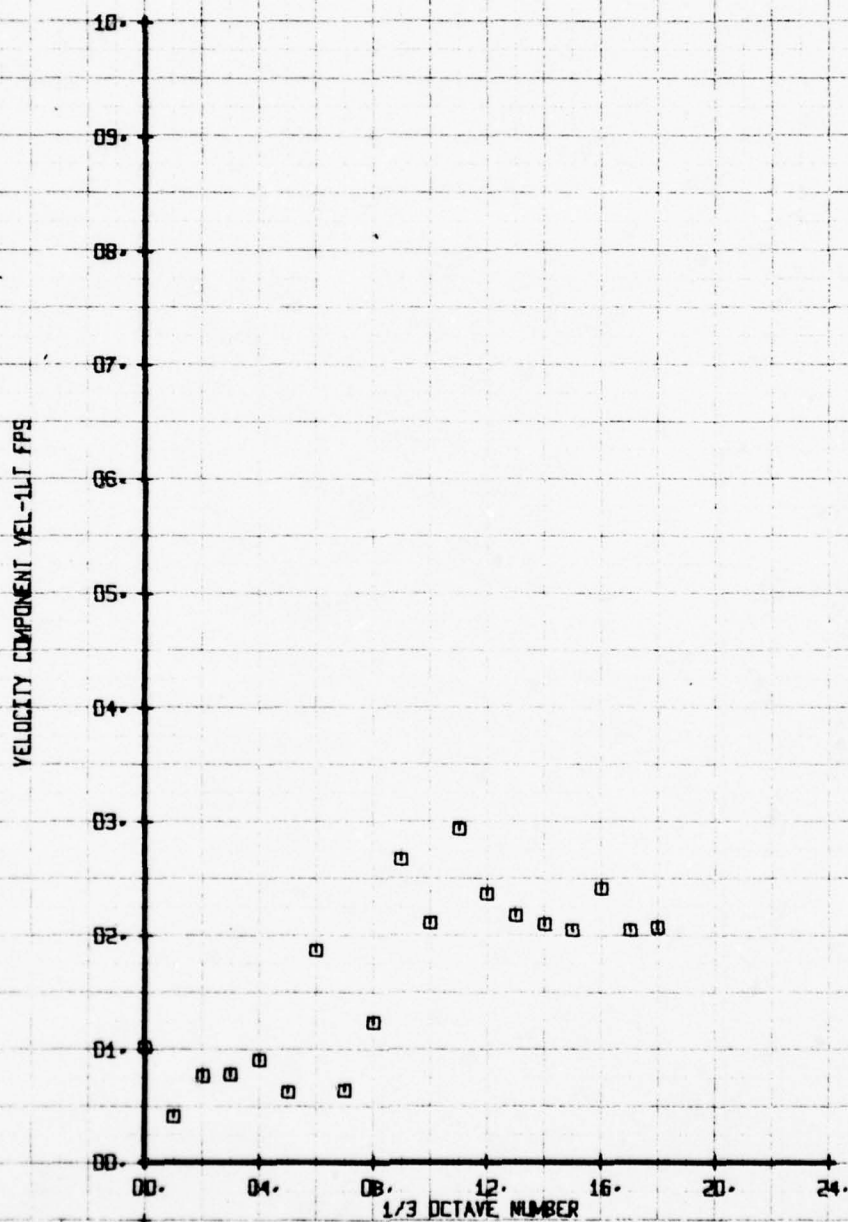
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE RT. OF STAB.
 RUN 119 TP 8

SYM	CH	PARAMETER
□	73	VEL-1LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE RT. OF STAB.
RUN 119 TP 9

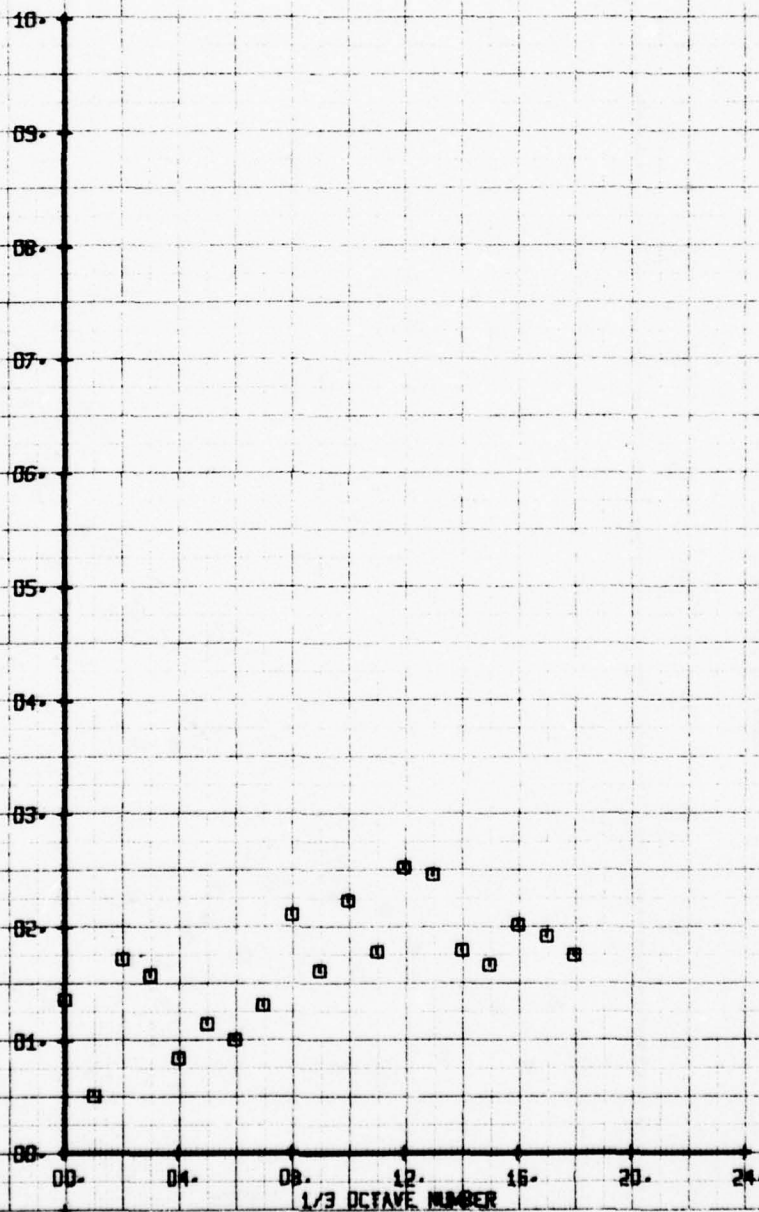
SYM	CH	LEGEND
□	73	PARAMETER VEL-1LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE RT. OF STAB.
 RUN 119 TP 12

LEGEND
 SYM CH. PARAMETER
 □ 73 VEL-1LT

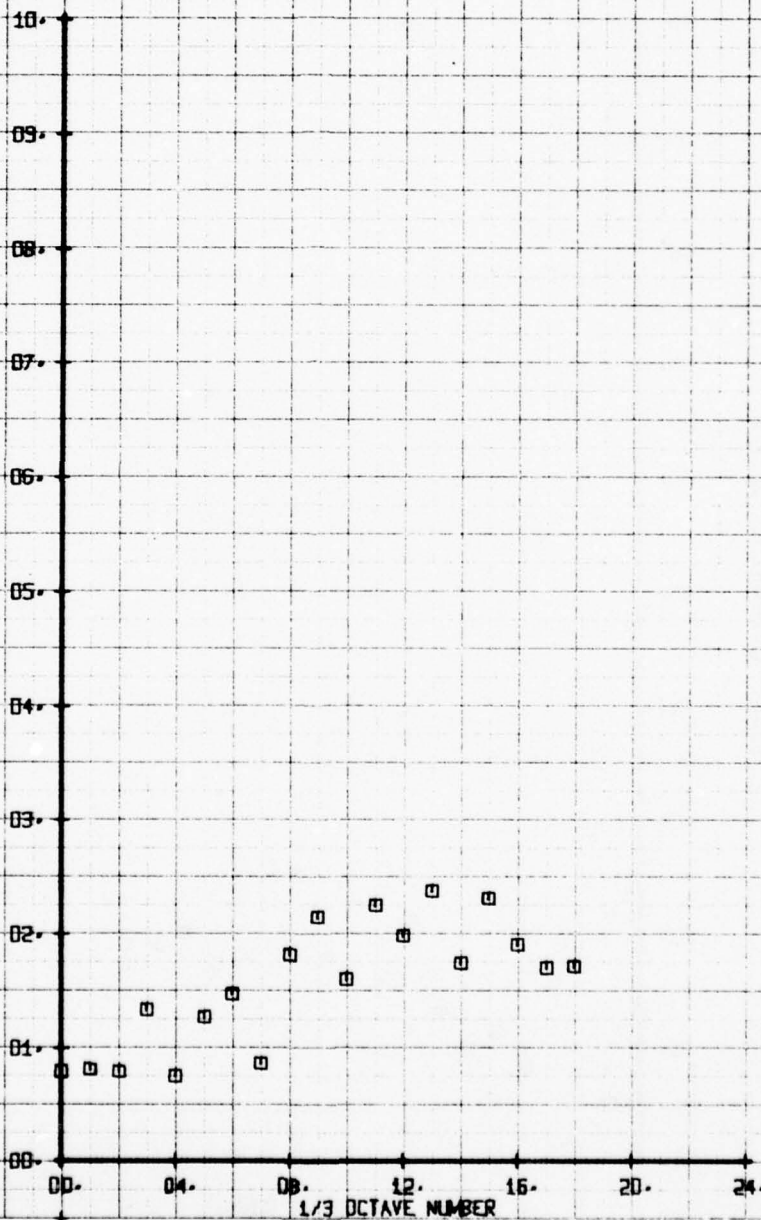
VELOCITY COMPONENT VEL-1LT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE RT. OF STAB.
 RUN 119 TP 14

SYM	CH	LEGEND
□	73	PARAMETER VEL-1LT

VELOCITY COMPONENT VEL-1LT FPS



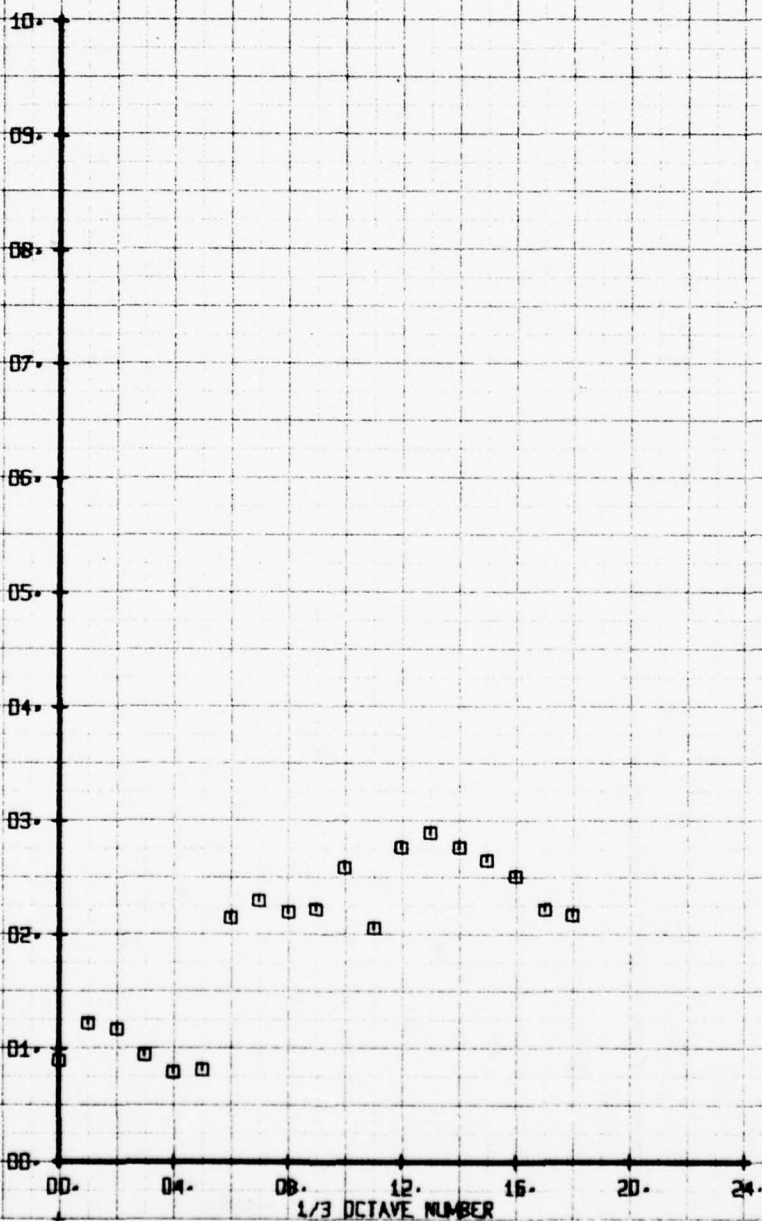
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE RT. OF STAB.
 RUN 119 TP 16

SYM
 □

CH
 73

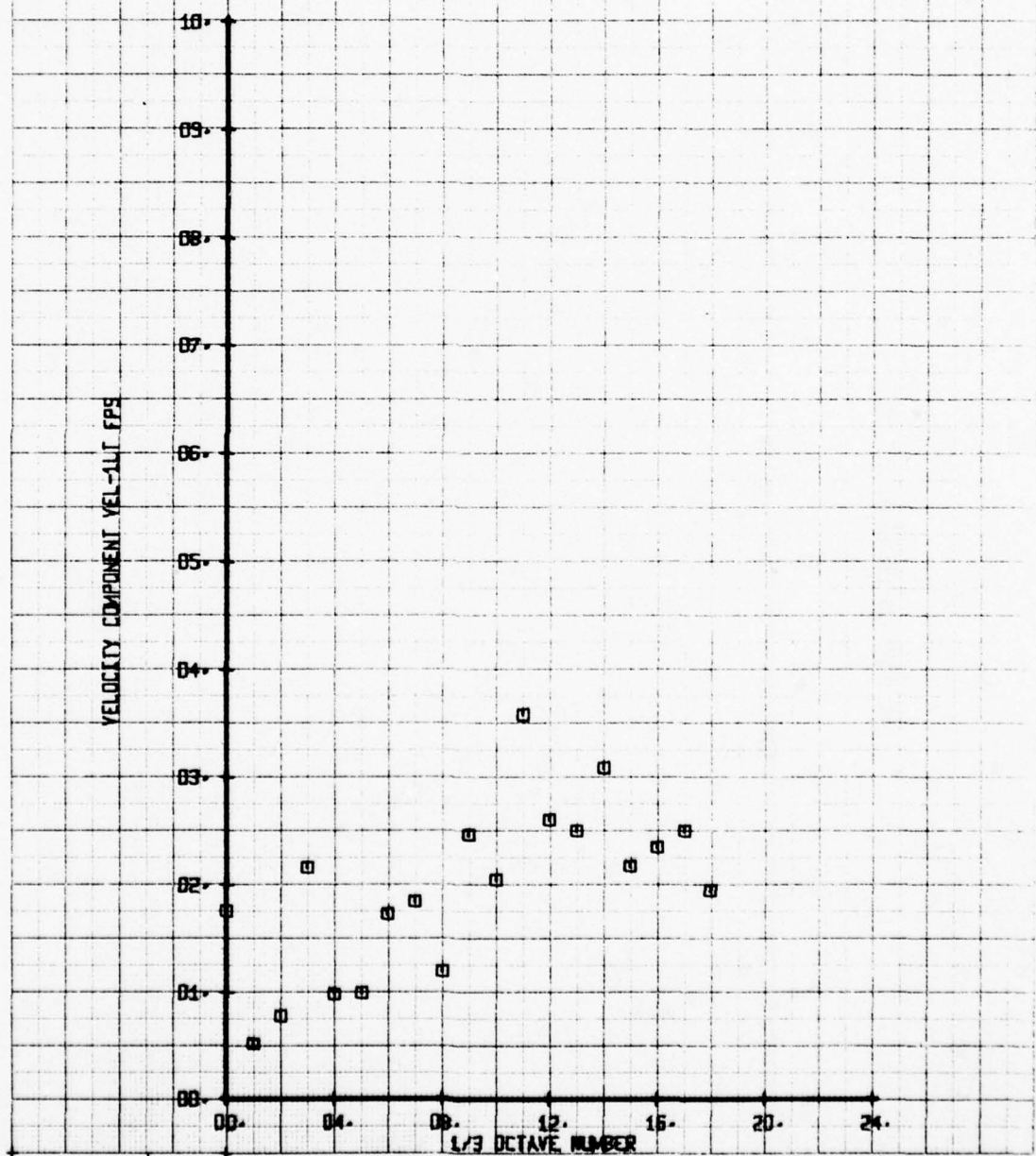
LEGEND
 PARAMETER
 VEL-1LT

VELOCITY COMPONENT VEL-1LT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE RT. OF STAB.
 RUN 119 TP 20

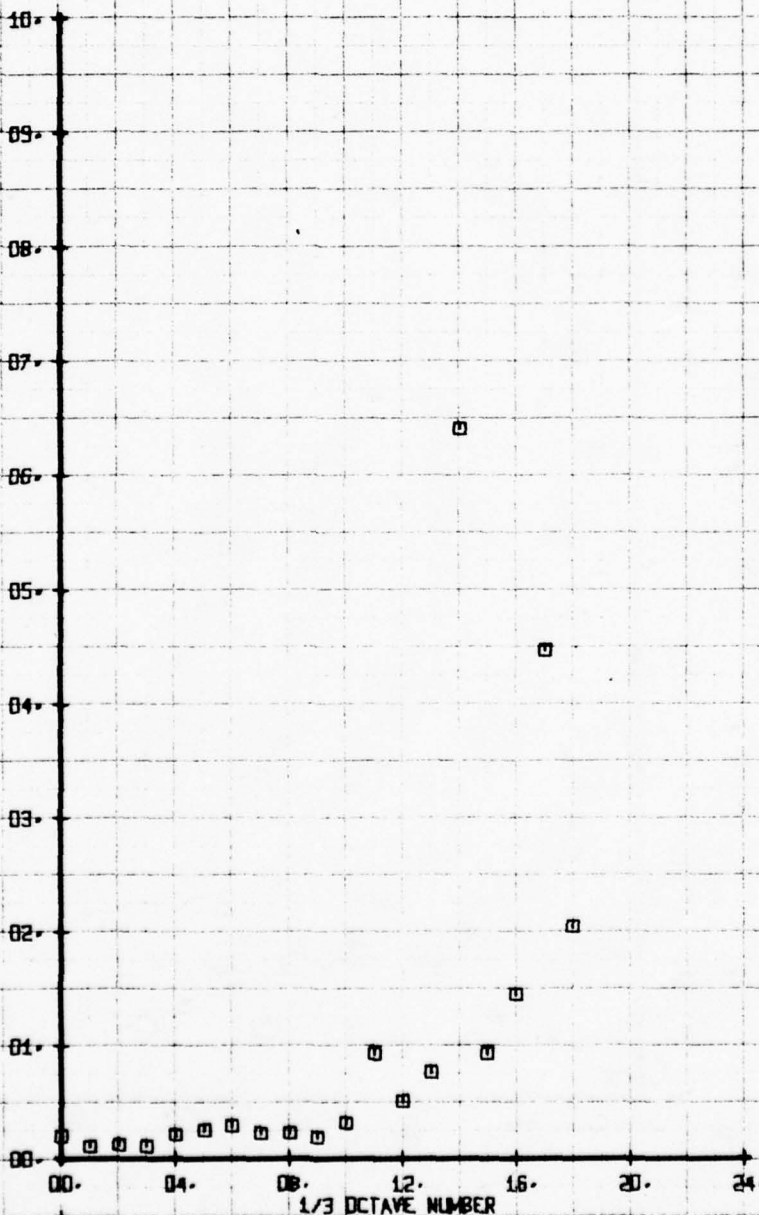
SYM	CH	PARAMETER
□	73	VEL-1LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIS. TRAVERSE RT. OF STAB.
 RUN 119 TP 25

LEGEND	
SYM	CH
□	73
	PARAMETER
	VEL-1LT

VELOCITY COMPONENT VEL-1LT FPS



325

SET 9
 BVWT 169

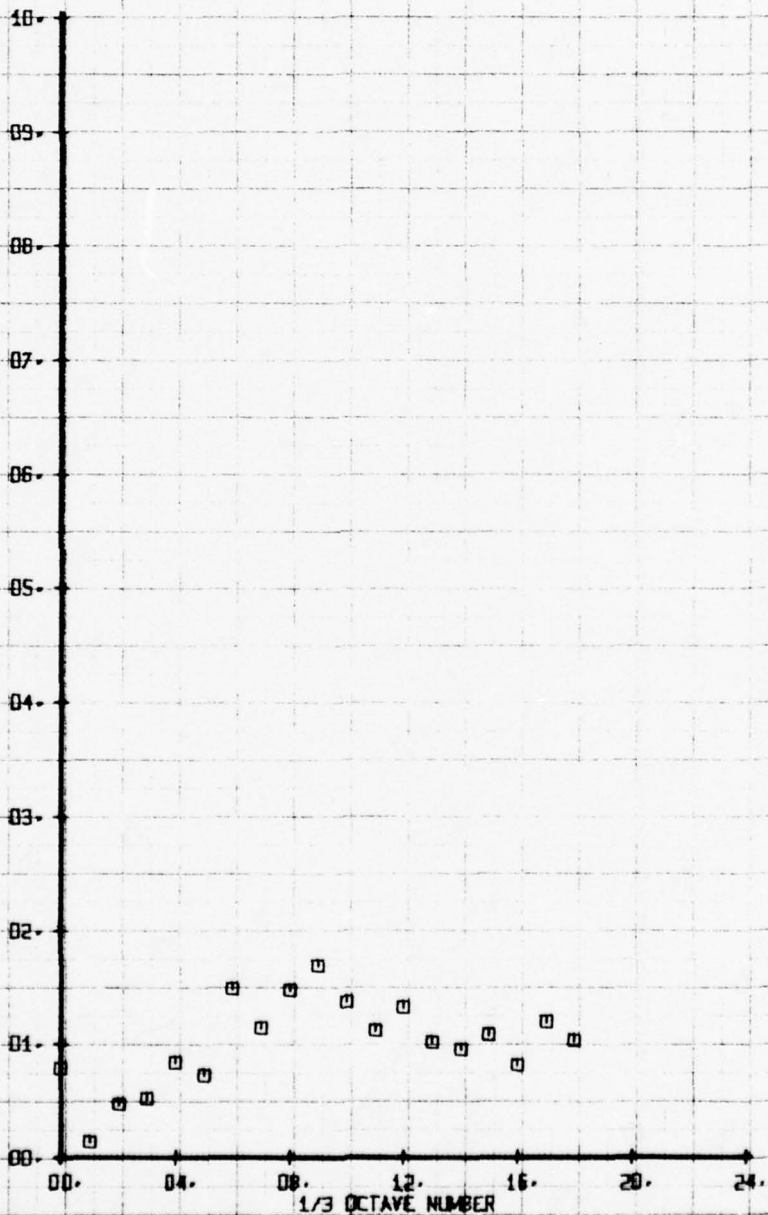
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE RT. OF STAB.
 RUN 119 TP 2

SYM
 □

CH
 72

LEGEND
 PARAMETER
 VEL-2LT

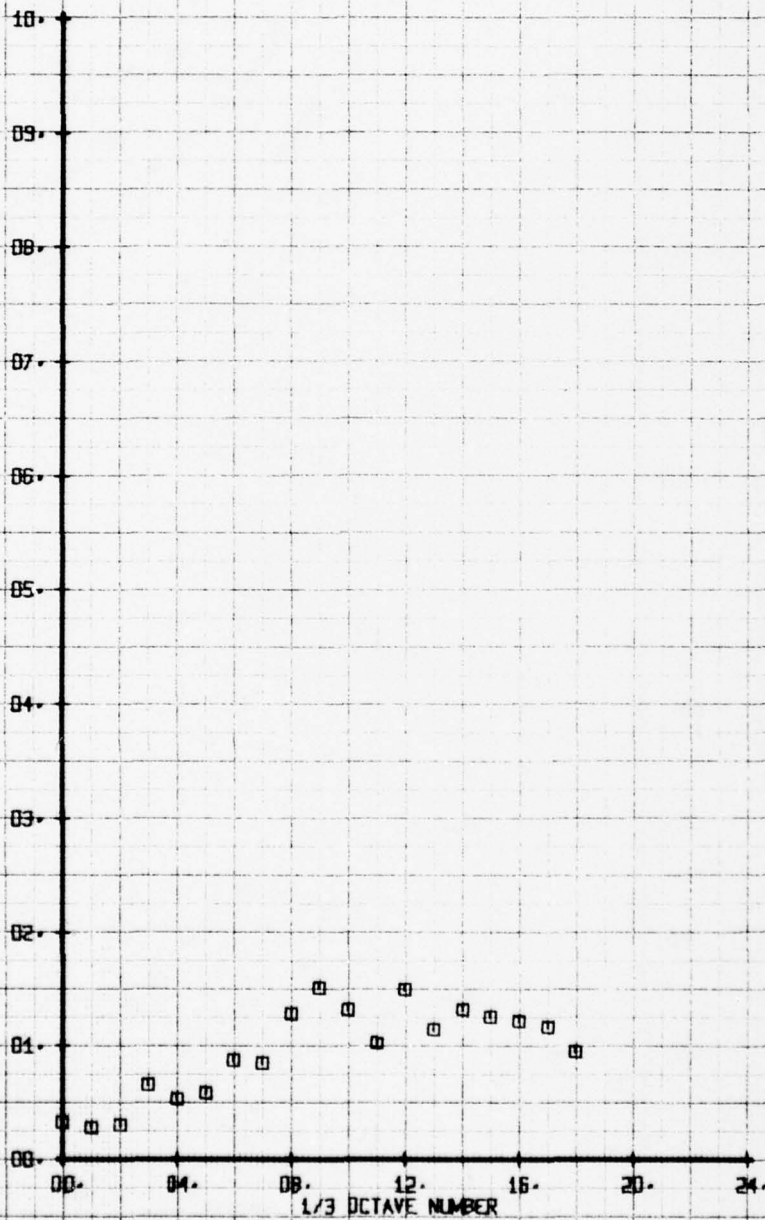
VELOCITY COMPONENT VEL-2LT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE RT. OF STAB.
 RUN 119 TP 5

LEGEND
 CH. 72
 PARAMETER
 VEL-2LT

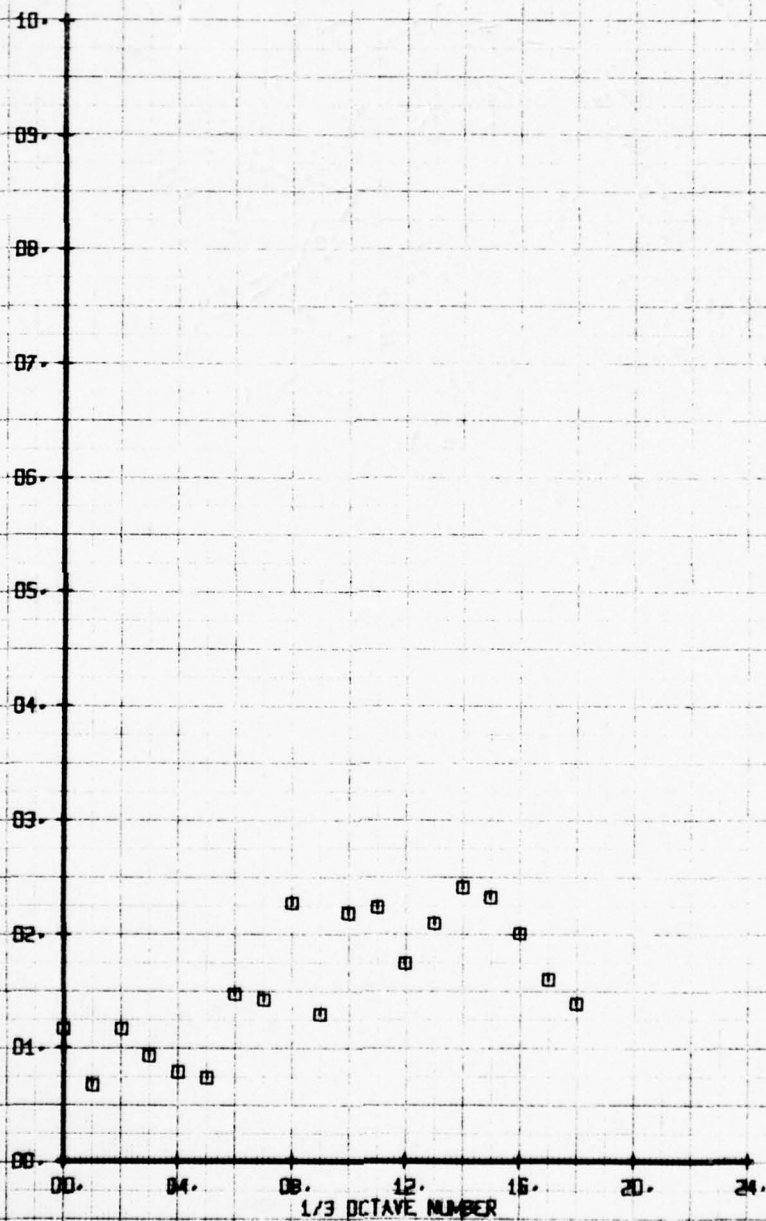
VELOCITY COMPONENT VEL-2LT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE RT. OF STAB.
 RUN 119 TP B

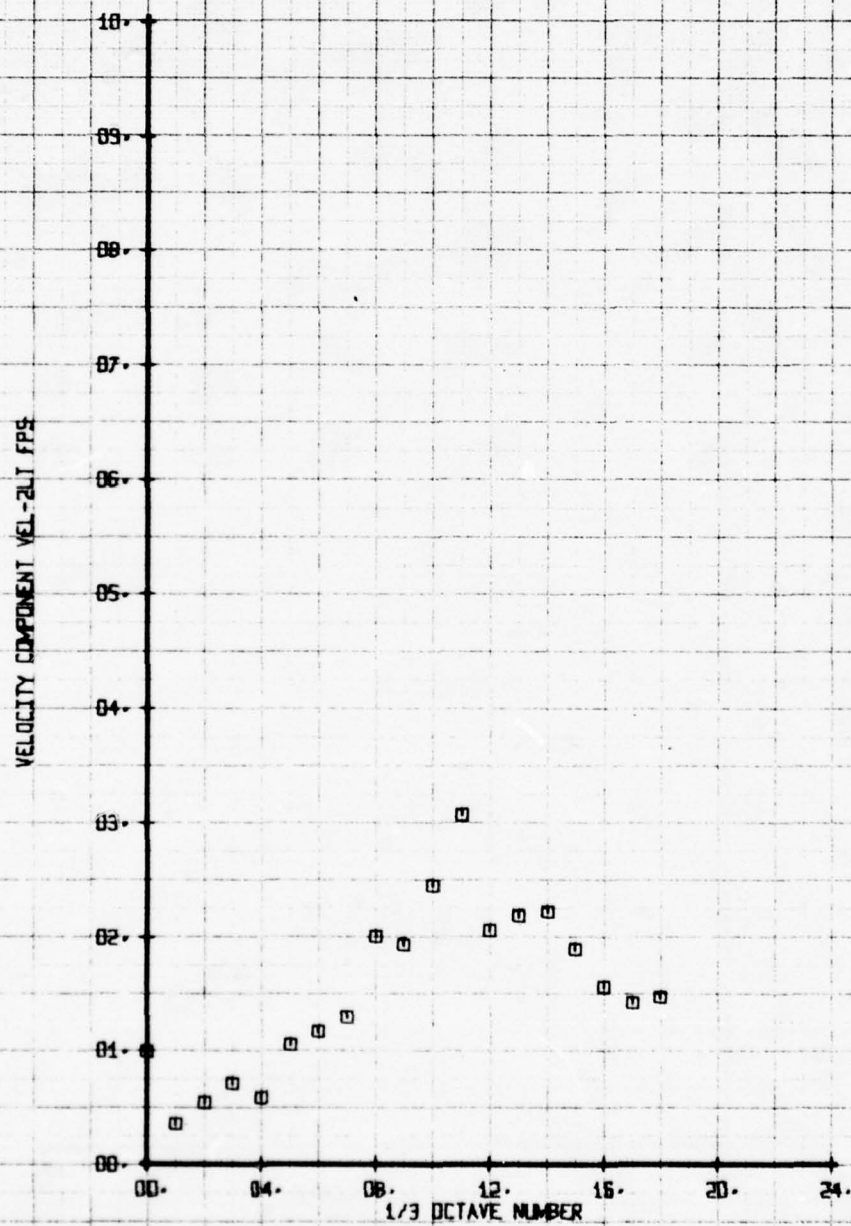
LEGEND		
SYM	CH	PARAMETER
□	72	VEL-2LT

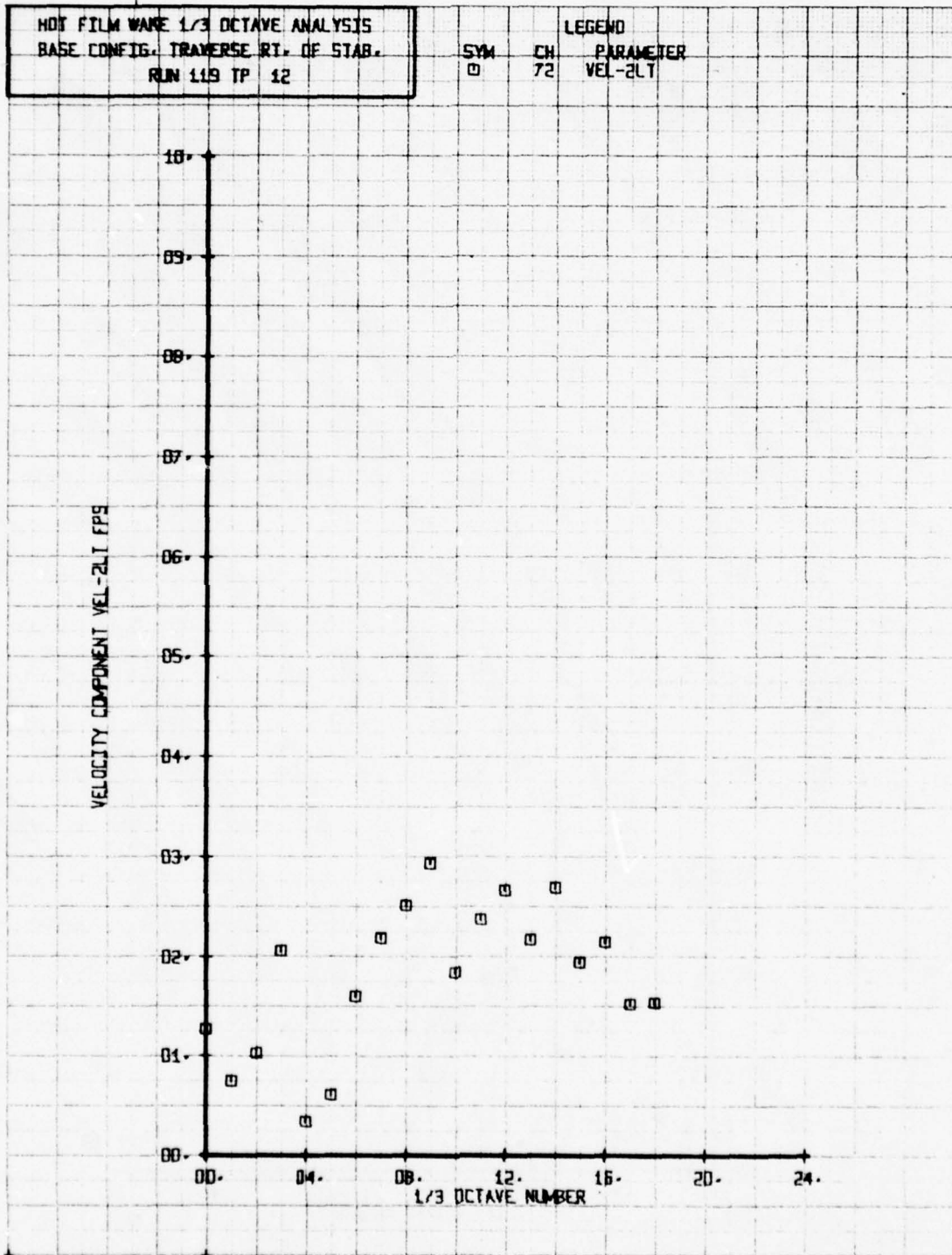
VELOCITY COMPONENT VEL-2LT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE RT. OF STAB.
 RUN 119 TP 9

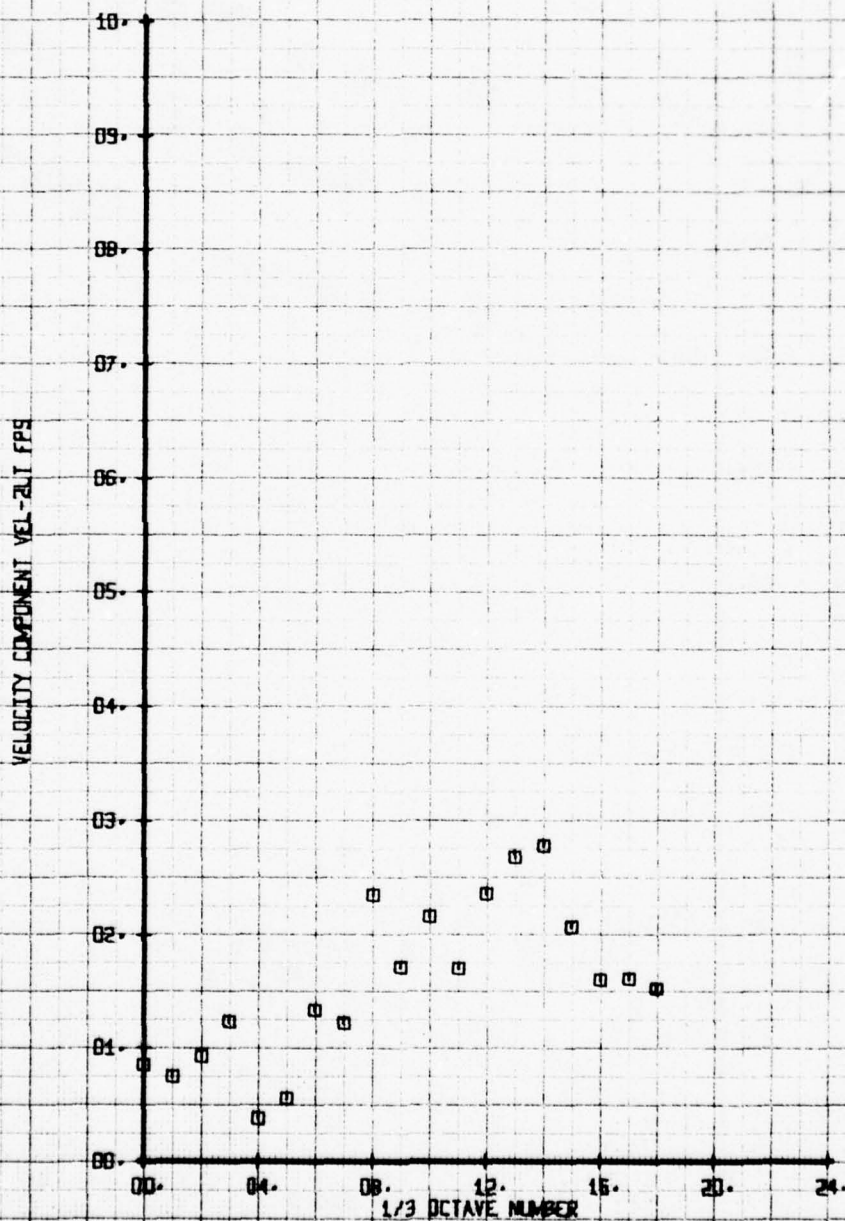
SYM	CH	PARAMETER
□	72	VEL-2LT





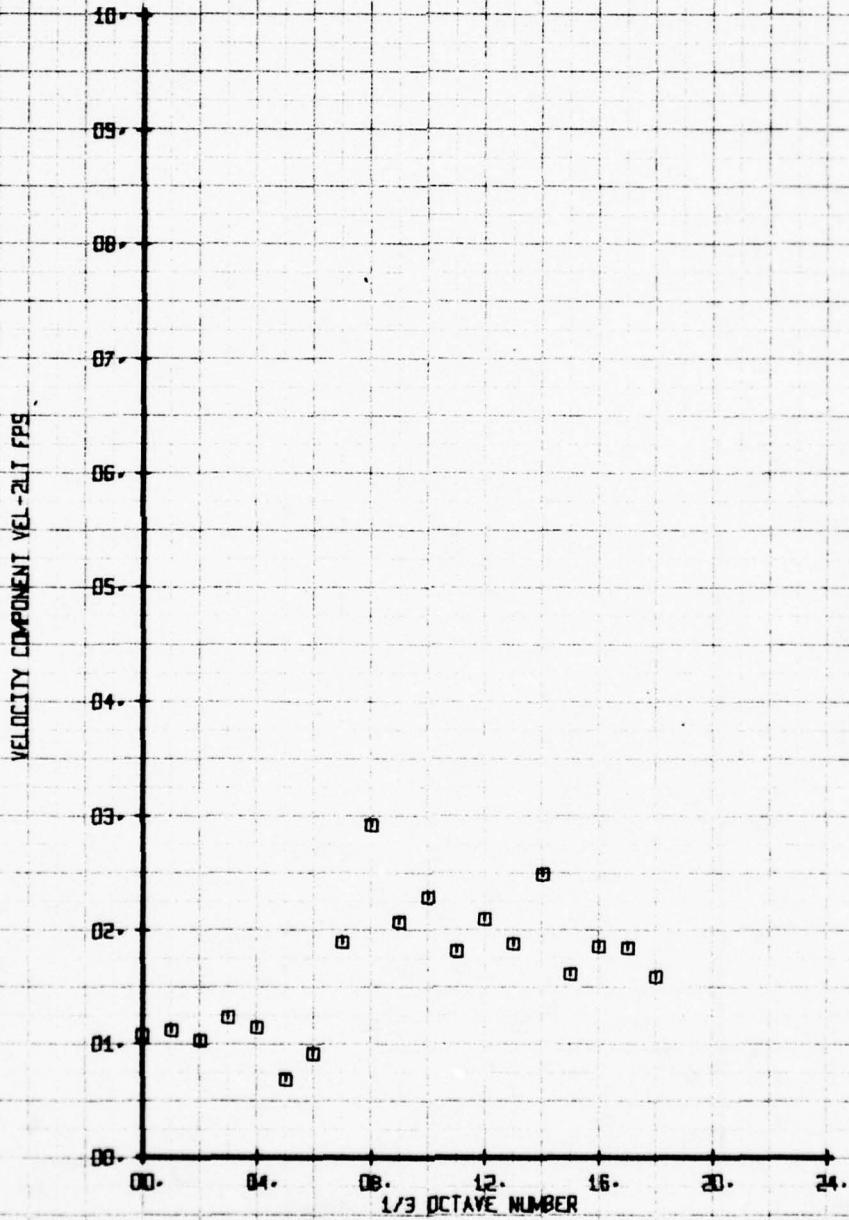
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE RT. OF STAB.
 RUN 119 TP 14

SYN CH PARAMETER
 0 72 VEL-2LT



HOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE RT. OF STAB.
 RUN 119 TP 16

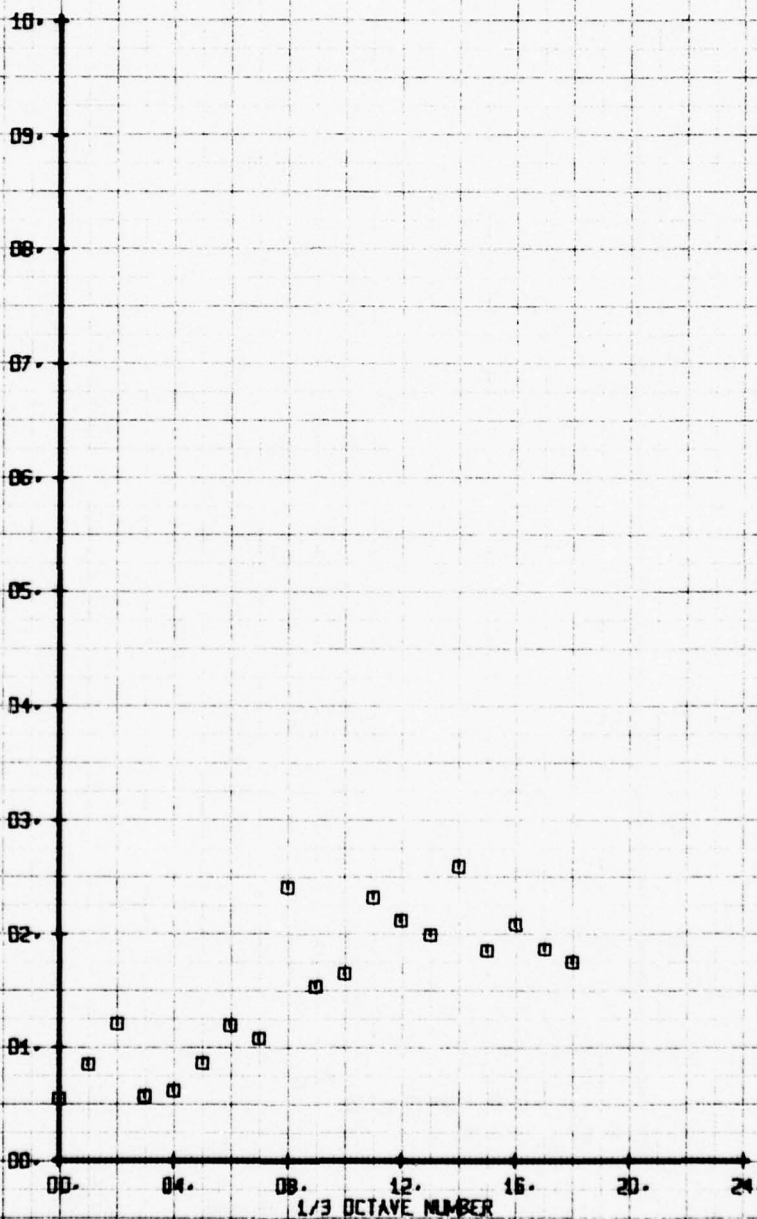
SYM	CH	PARAMETER
0	72	VEL-2LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE RT. OF STAB.
 RUN 119 TP 20

SYM	CH	PARAMETER
□	72	VEL-2LT

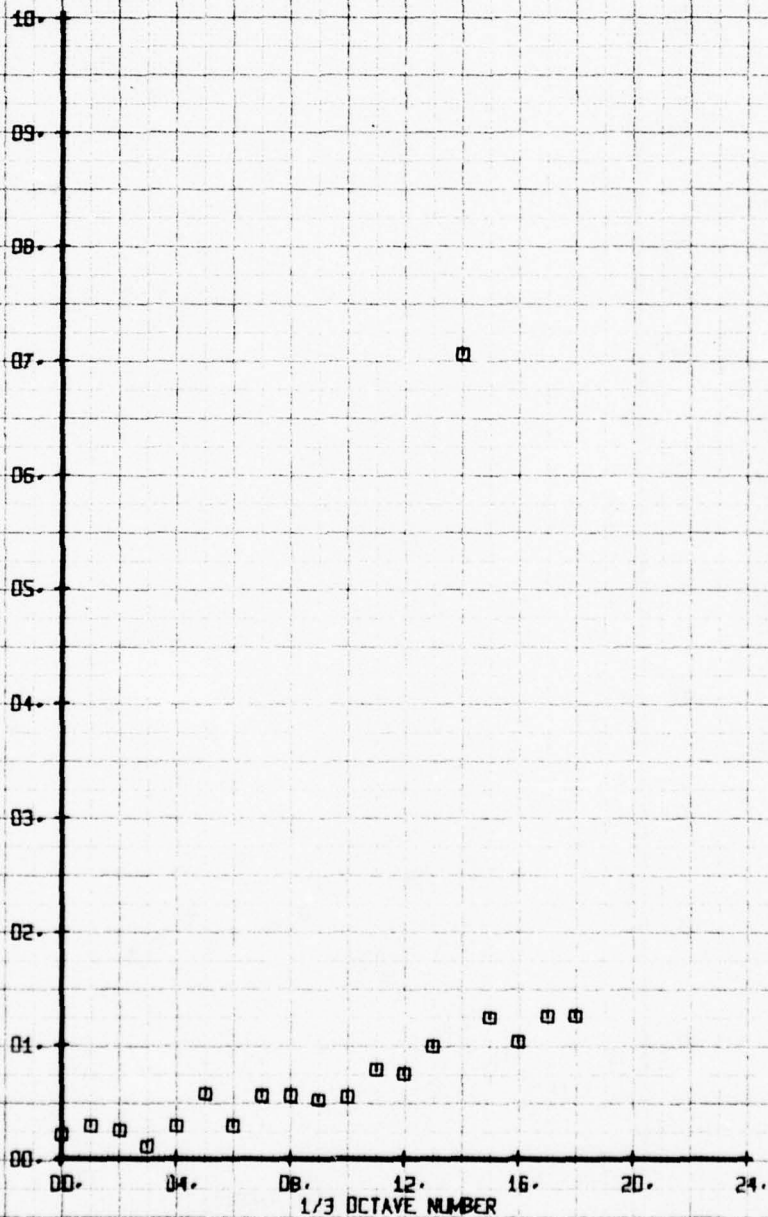
VELOCITY COMPONENT VEL-2LT FPS



HDT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE RT. OF STAB.
 RUN 119 TP 25

SYM	CH	PARAMETER
D	72	VEL-2LT

VELOCITY COMPONENT VEL-2LT FPS



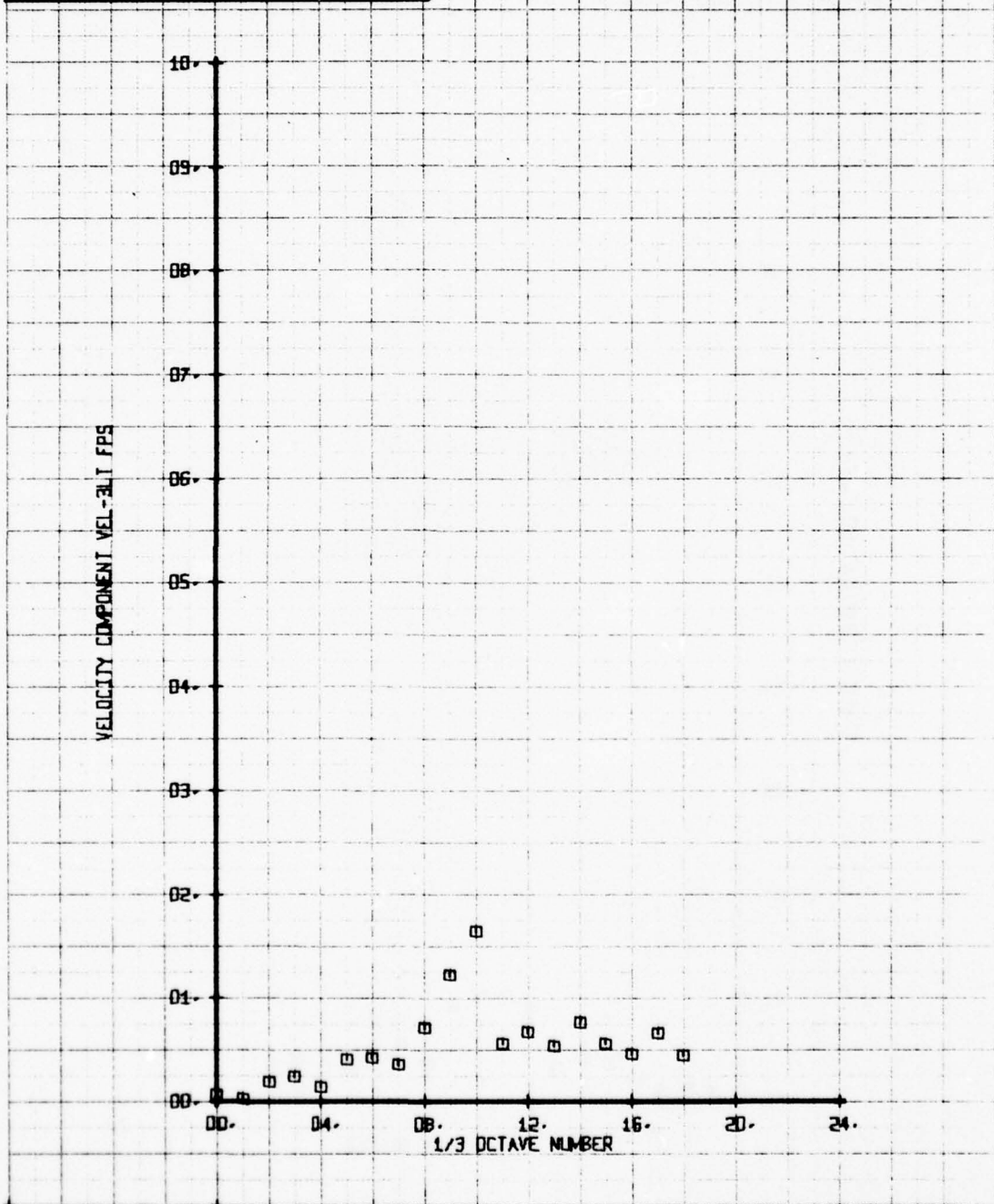
ET 9
 WT 169

334

SET 9
 BVWT 169

HOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE RT. OF STAB.
 RUN 119 TP 2

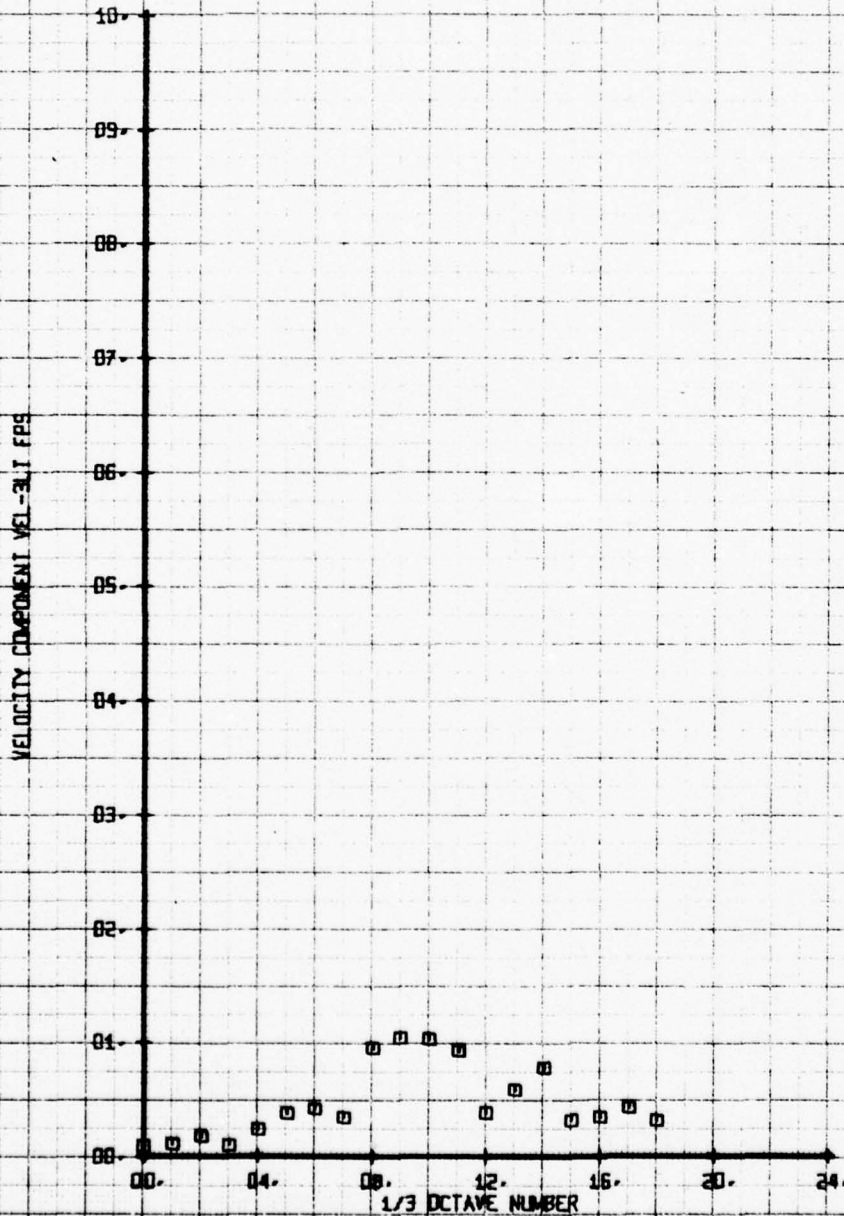
SYM	CH	PARAMETER
□	0	VEL-3LT



ET 9
 WT 169

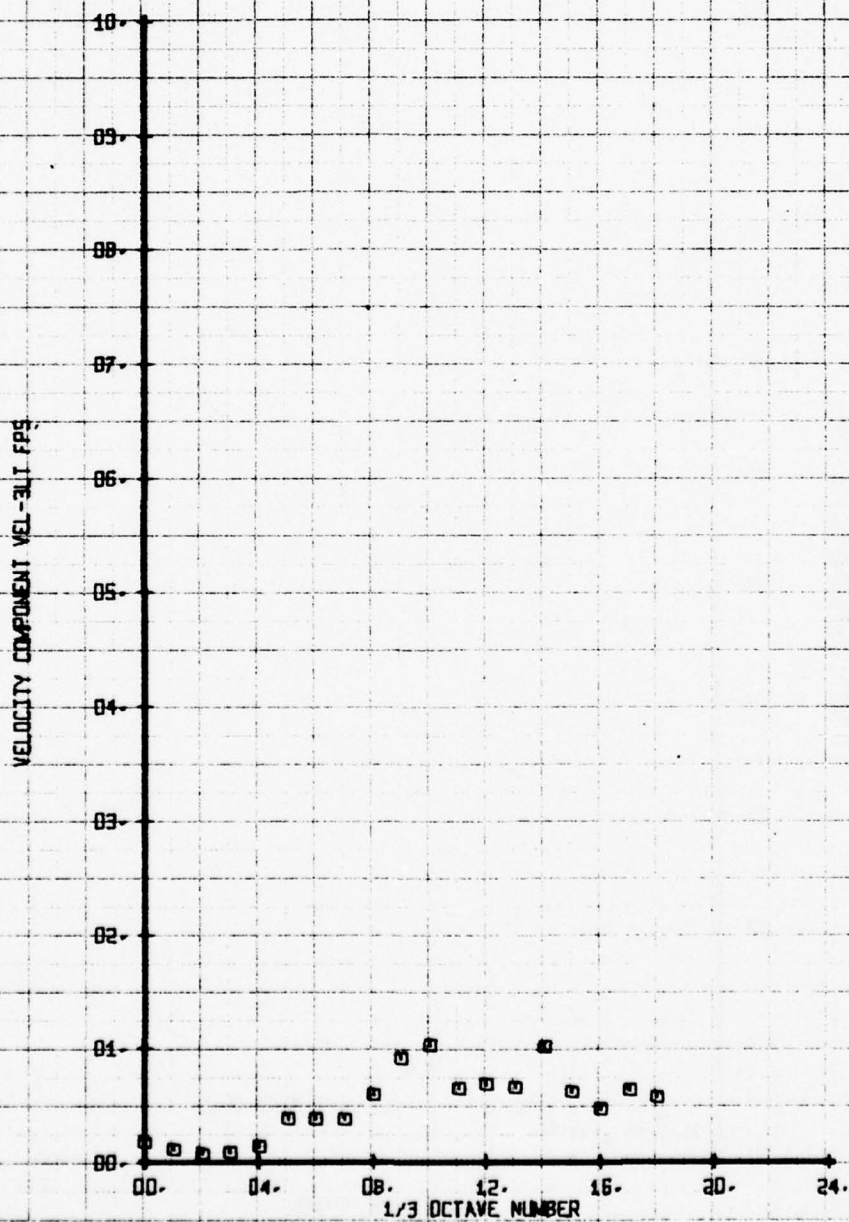
NOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE RT. OF STAB.
 RUN 119 TP 5

SYM	CH	LEGEND
0	70	PARAMETER VEL-3LT



NOT FIUM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE RT. OF STAB.
 RUN 119 TP B

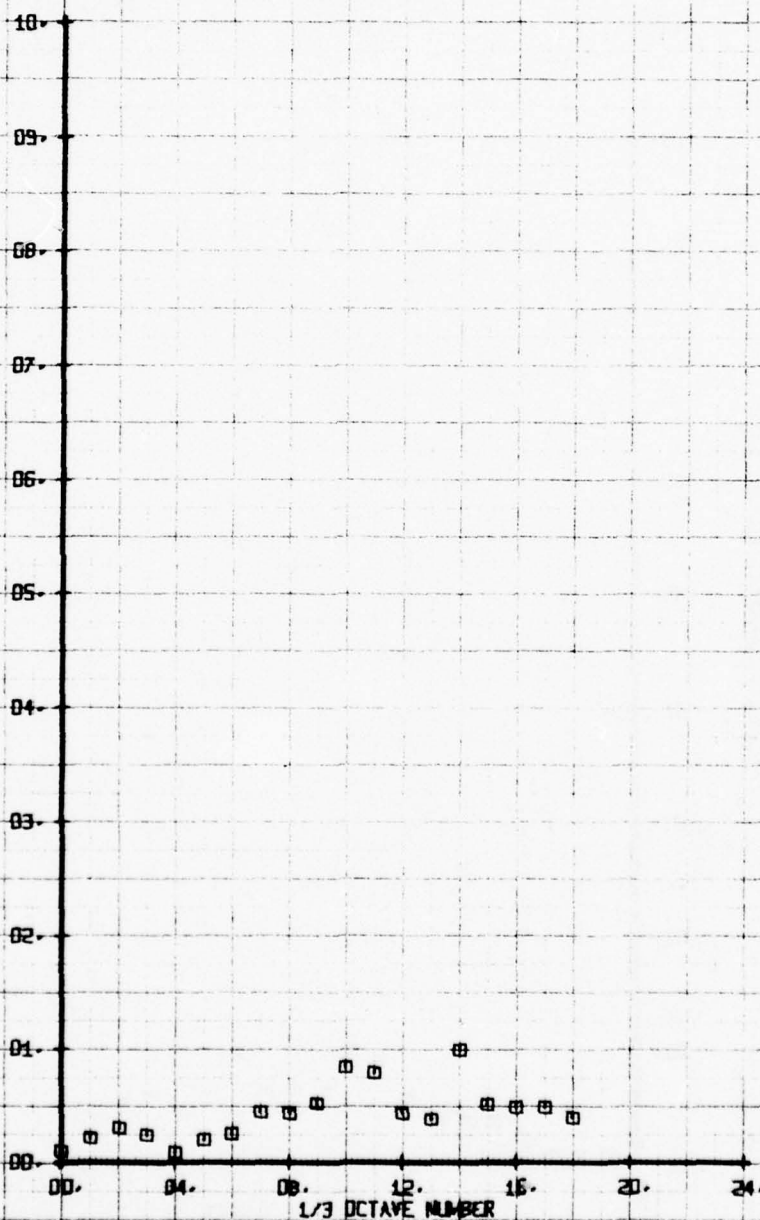
LEGEND
 CH 70
 PARAMETER
 VEL-9LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE RT. OF STAB.
 RUN 119 TP 9

LEGEND
 SYM CH PARAMETER
 □ 70 VEL-3LT

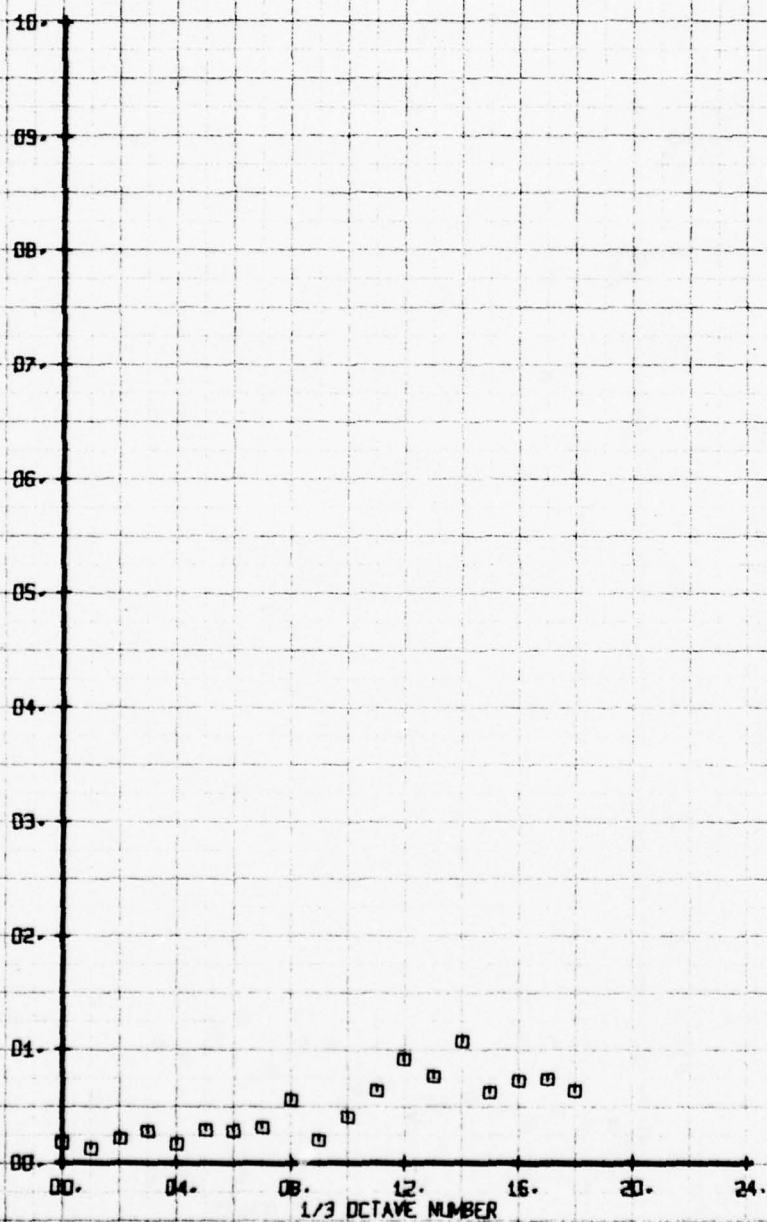
VELOCITY COMPONENT VEL-3LT FPS



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE RT. OF STAR.
 RUN 119 TP 12

SYM	CH	LEGEND
□	70	PARAMETER VEL-3LT

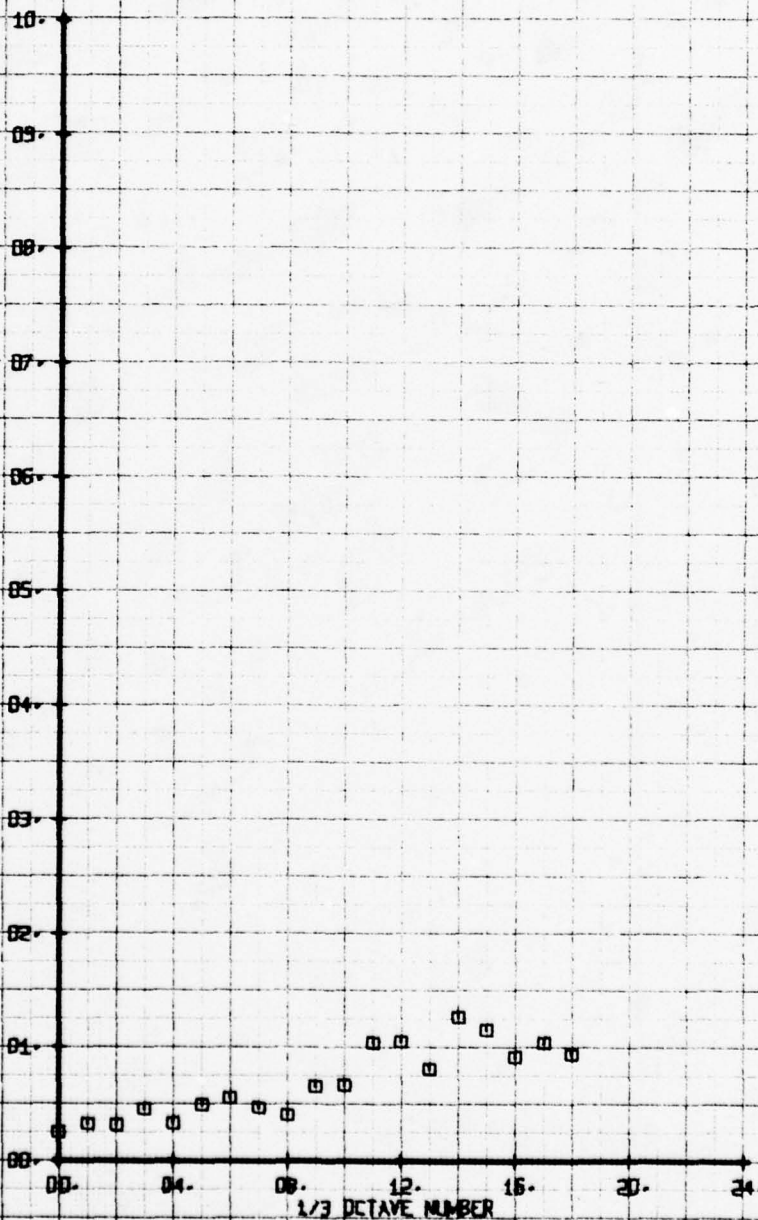
VELOCITY COMPONENT VEL-3LT FPS



HOT FILM WARE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE RT. OF STAB.
 RUN 119 TP 14

SYM	CH	PARAMETER
□	70	VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS



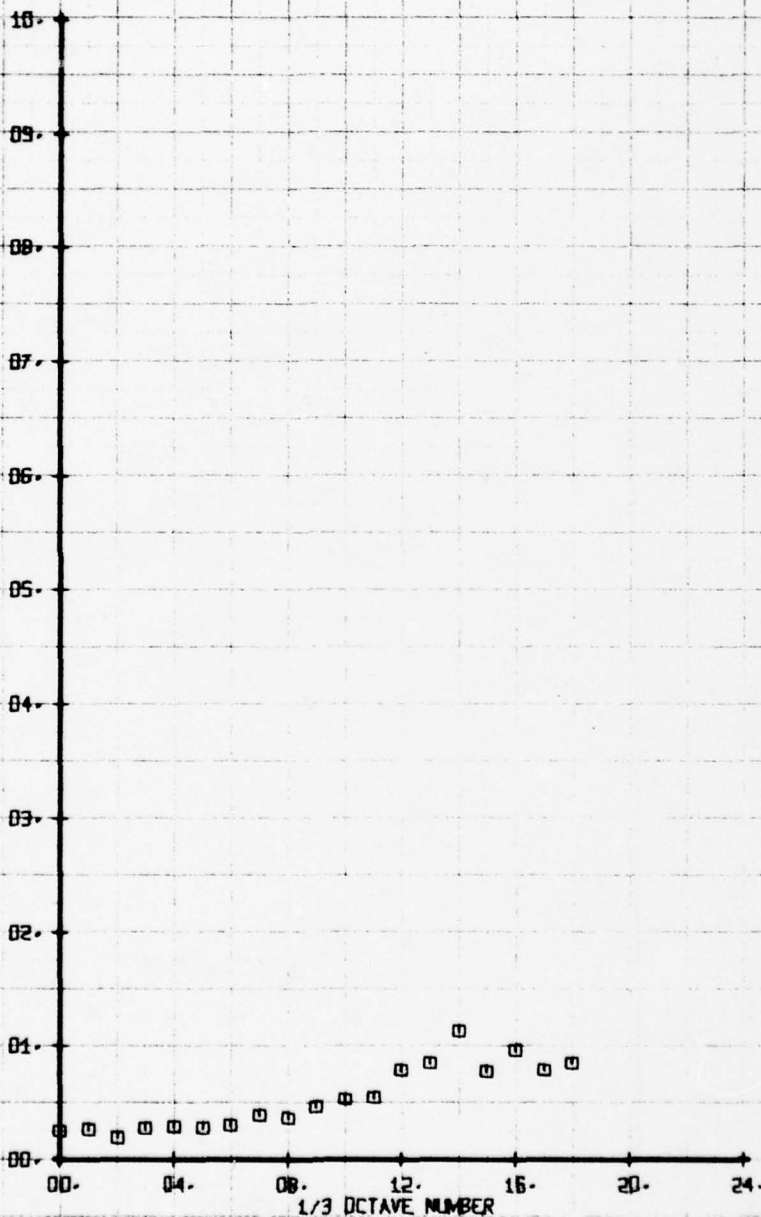
HOT FILM WIRE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE RT. OF STAB.
RUN 119 TP 16

SYM
□

CH
70

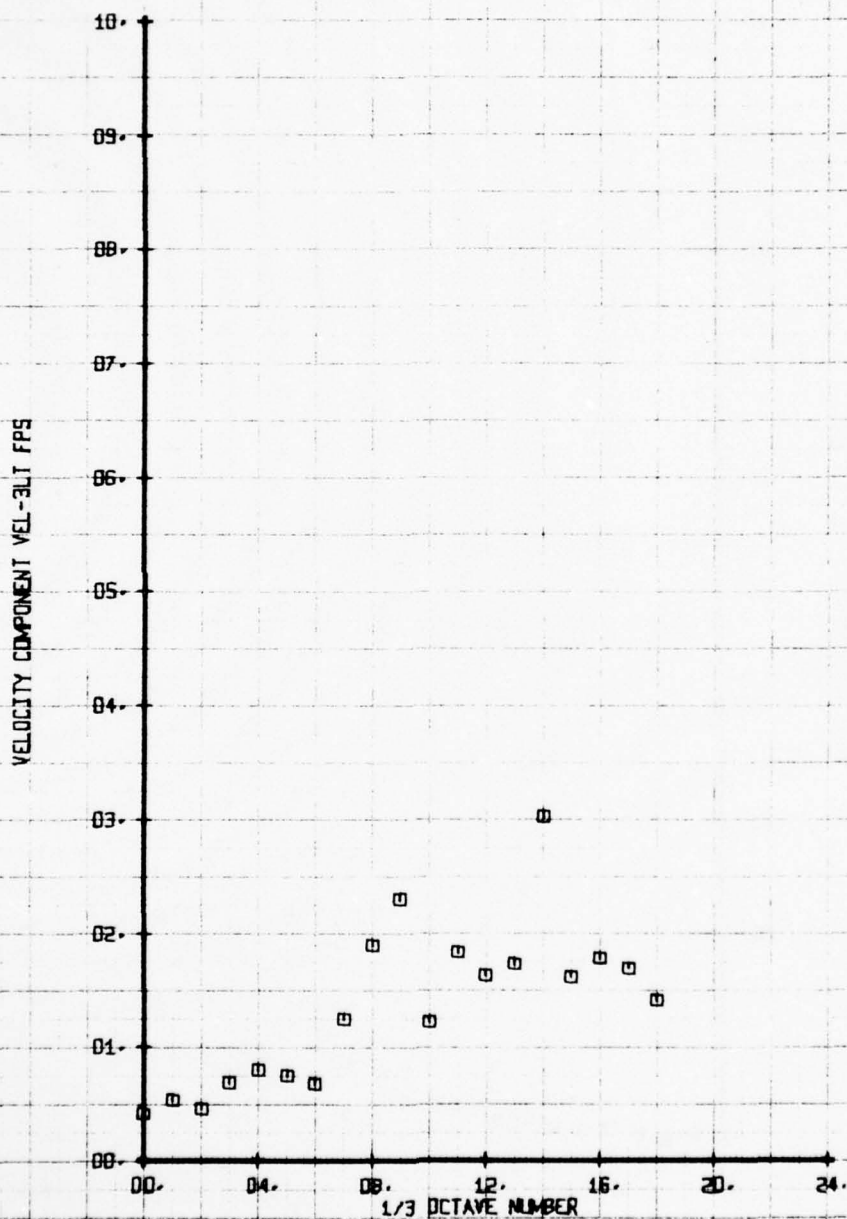
LEGEND
PARAMETER
VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS.



NOT FILM WARE 1/3 OCTAVE ANALYSIS
BASE CONFIG. TRAVERSE RT. OF STAB.
RUN 119 TP 20

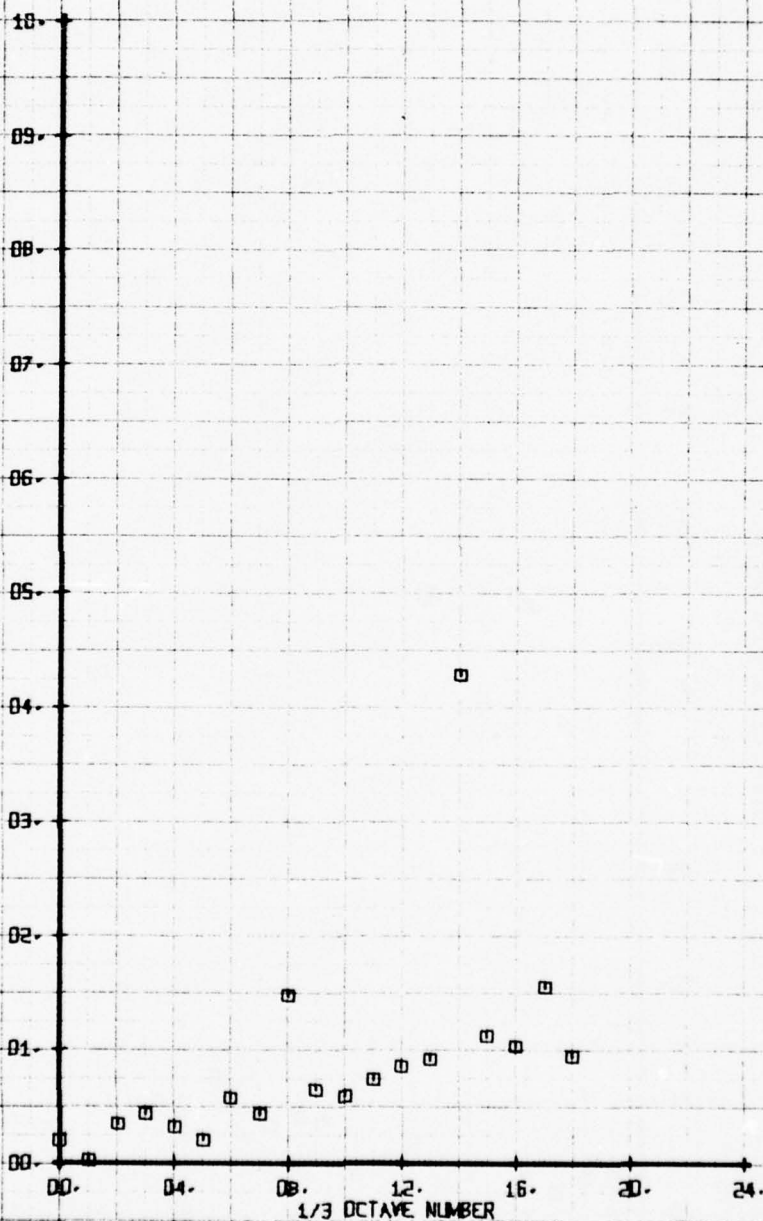
LEGEND		
SYM	CH	PARAMETER
□	70	VEL-3LT



NOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. TRAVERSE RT. OF STAB.
 RUN 119 TP 25

SYM	CH	PARAMETER
□	70	VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS



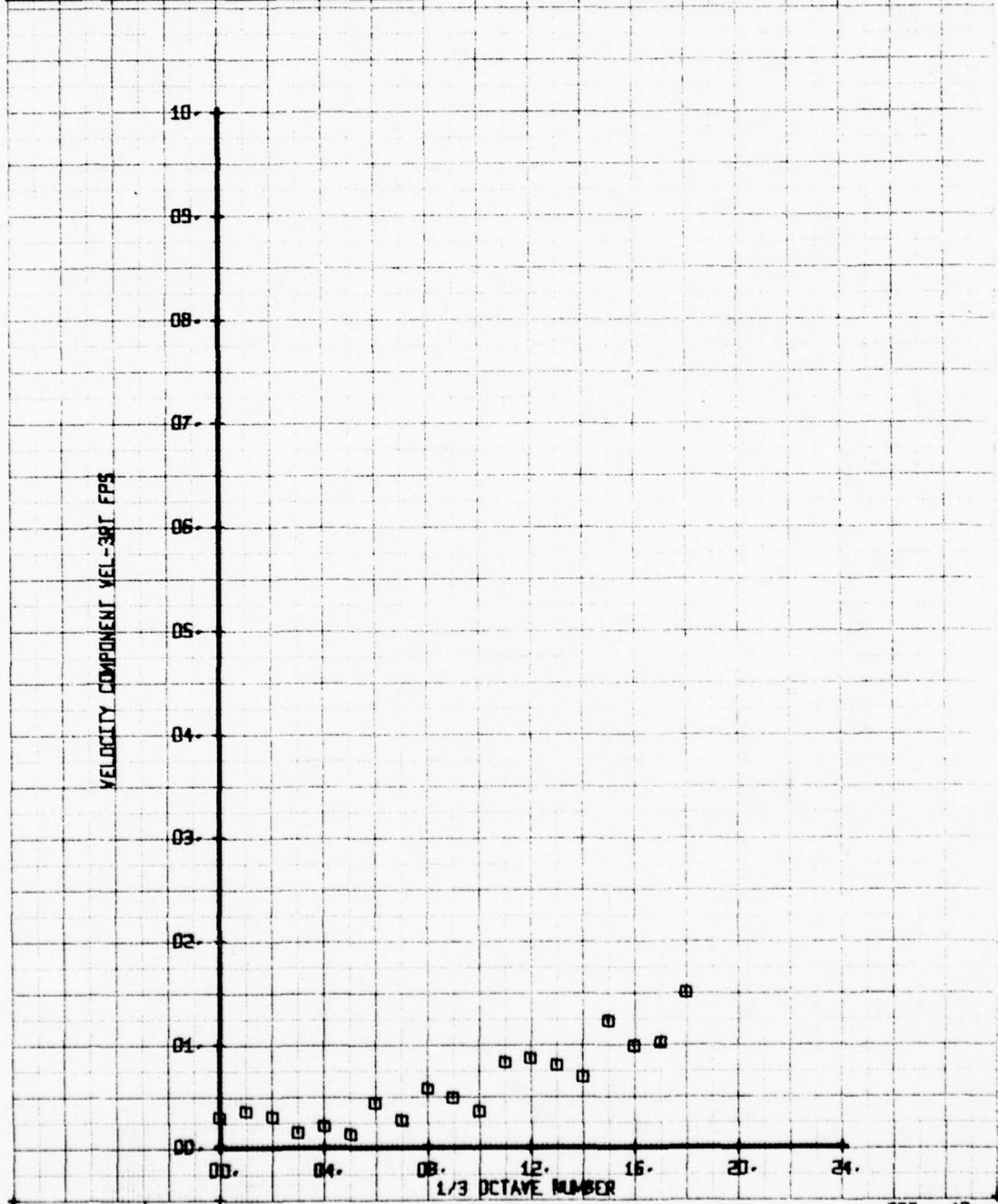
ET 9
 WT 169

343

SET 9
 BWWT 169

NOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. EFFECT OF STAB.
 RUN 121 TP 3

SYM	CH	PARAMETER
□	71	VEL-3RT



ET 10
 WT 169

344

SET 10
 BVWT 169

NOI FILM WAVE 1/3 OCTAVE ANALYSIS

BASE CORRECTED EFFECT OF STAB.

RUN 121 TP 4

SYM

□

CH

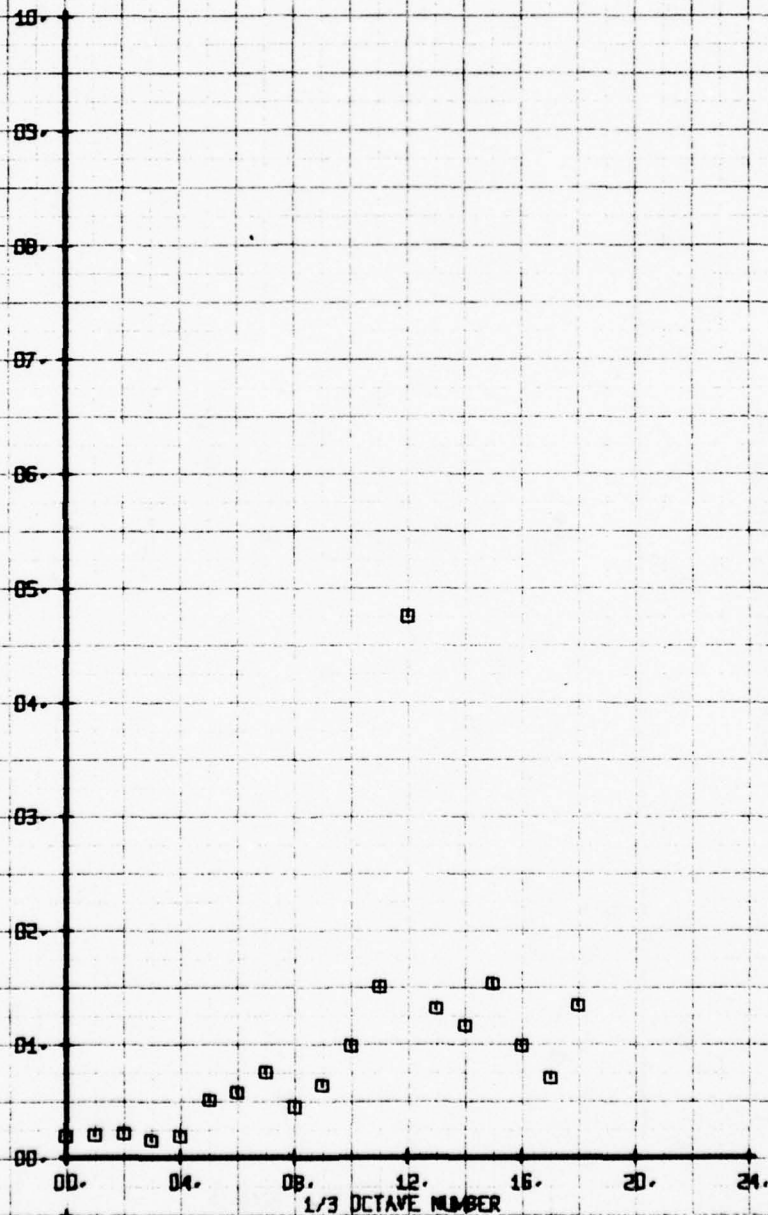
71

LEGEND

PARAMETER

VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS

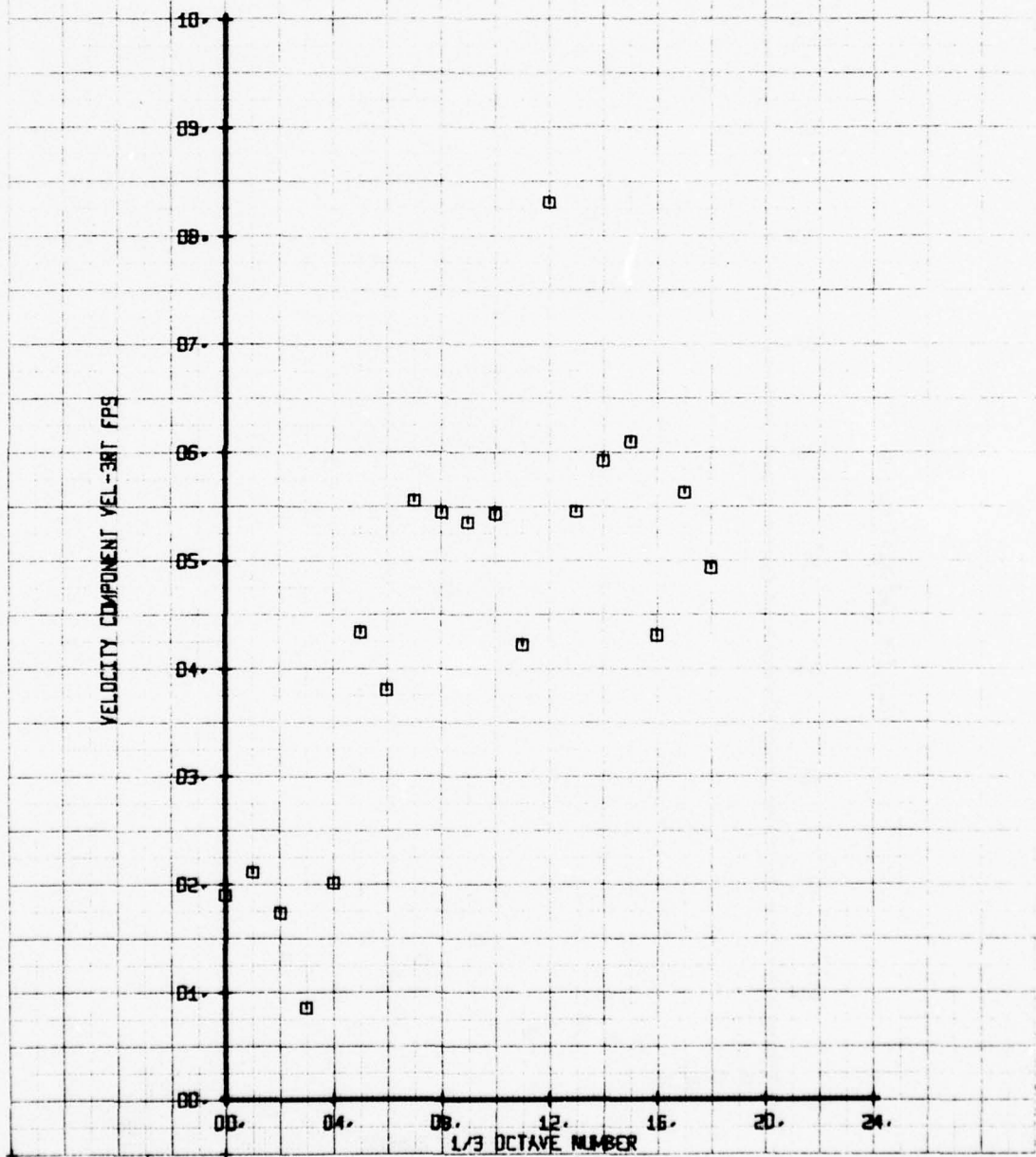


ET 10
WT 169

345

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. EFFECT OF STAB.
 RUN 121 TP 6

LEGEND
 SYM CH PARAMETER
 □ 71 VEL-3RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS

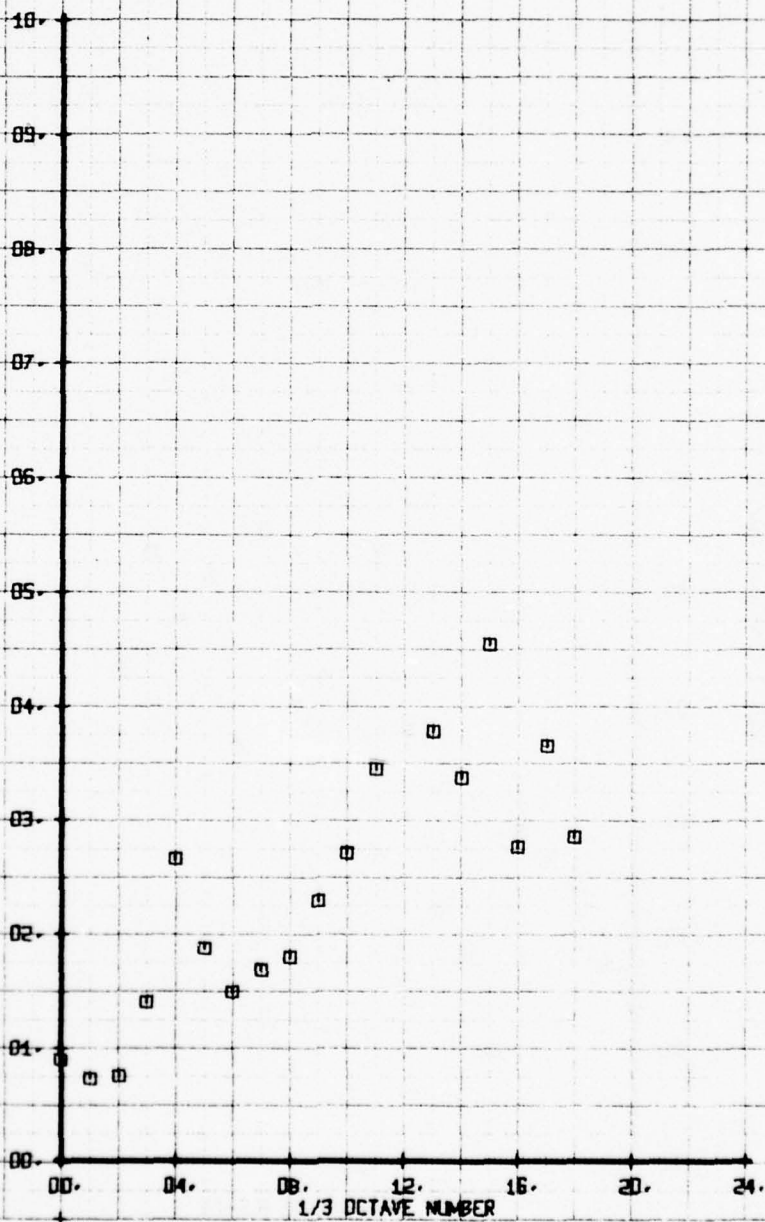
BASE CORRECT. EFFECT OF STAB.

RUN 121 TP 8

LEGEND

SYM	CH	PARAMETER
□	71	VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS



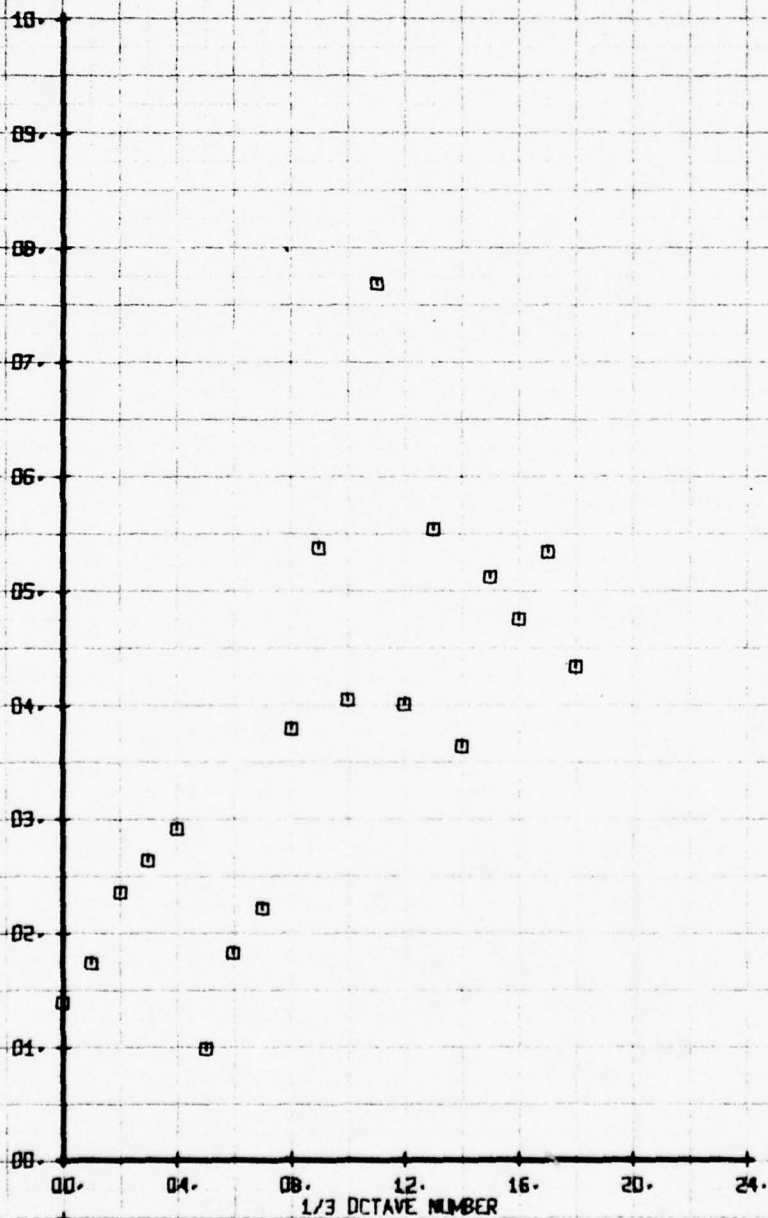
HOT FILM WARE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. EFFECT OF STAB.
 RUN 121 TP 10

SYM
 □

CH
 71

LEGEND
 PARAMETER
 VEL-3RT

VELOCITY COMPONENT VEL-3RT FPS



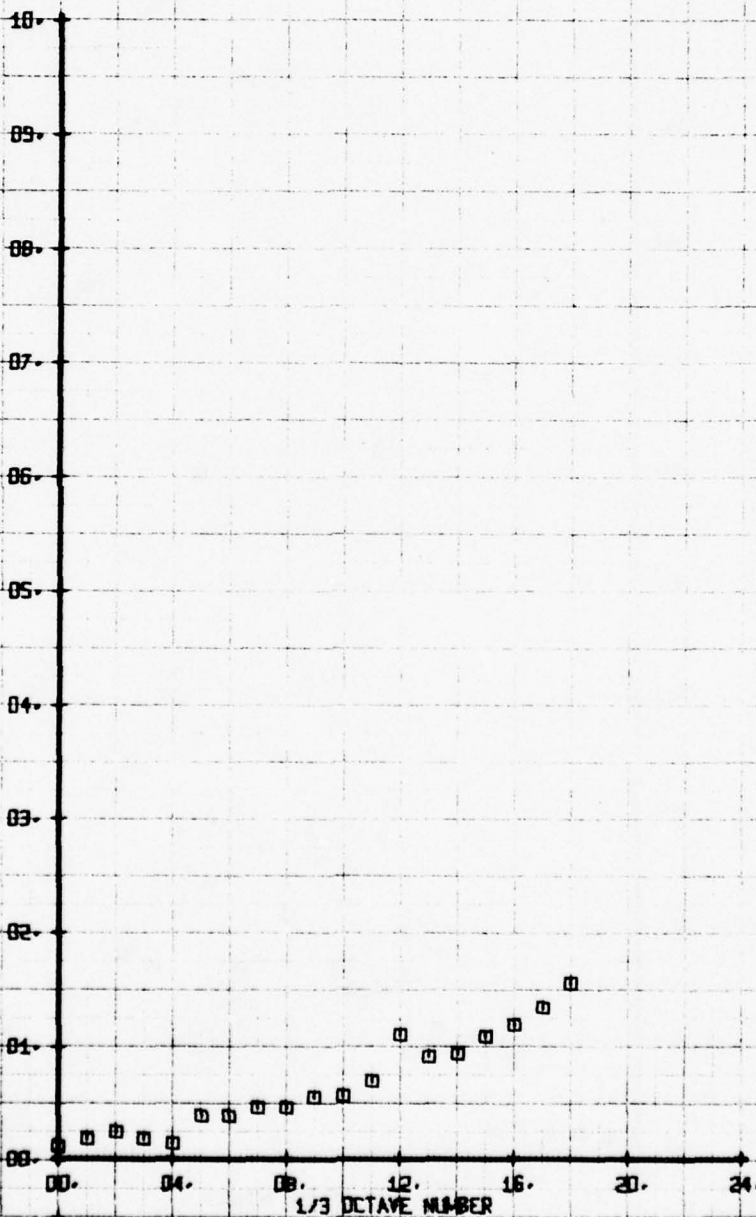
348

SET 10
 BVWT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. EFFECT OF STAB.
 RUN 121 TP 3

SYM	CH	PARAMETER
□	75	VEL-2RT

VELOCITY COMPONENT VEL-2RT FPS



ET 10
 WT 169

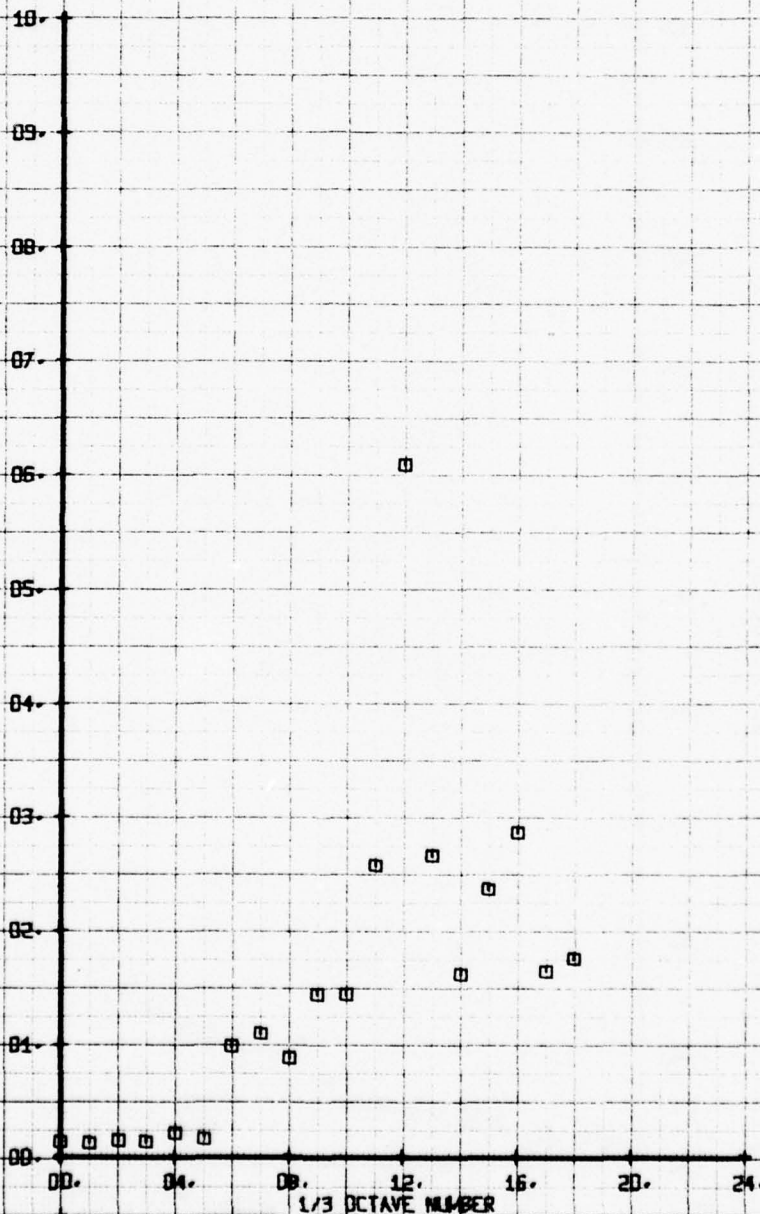
349

SET 10
 BVWT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. EFFECT OF STAB.
 RUN 121 TP 4

SYM	CH	LEGEND
□	75	PARAMETER VEL-2RT

VELOCITY COMPONENT VEL-2RT FPS



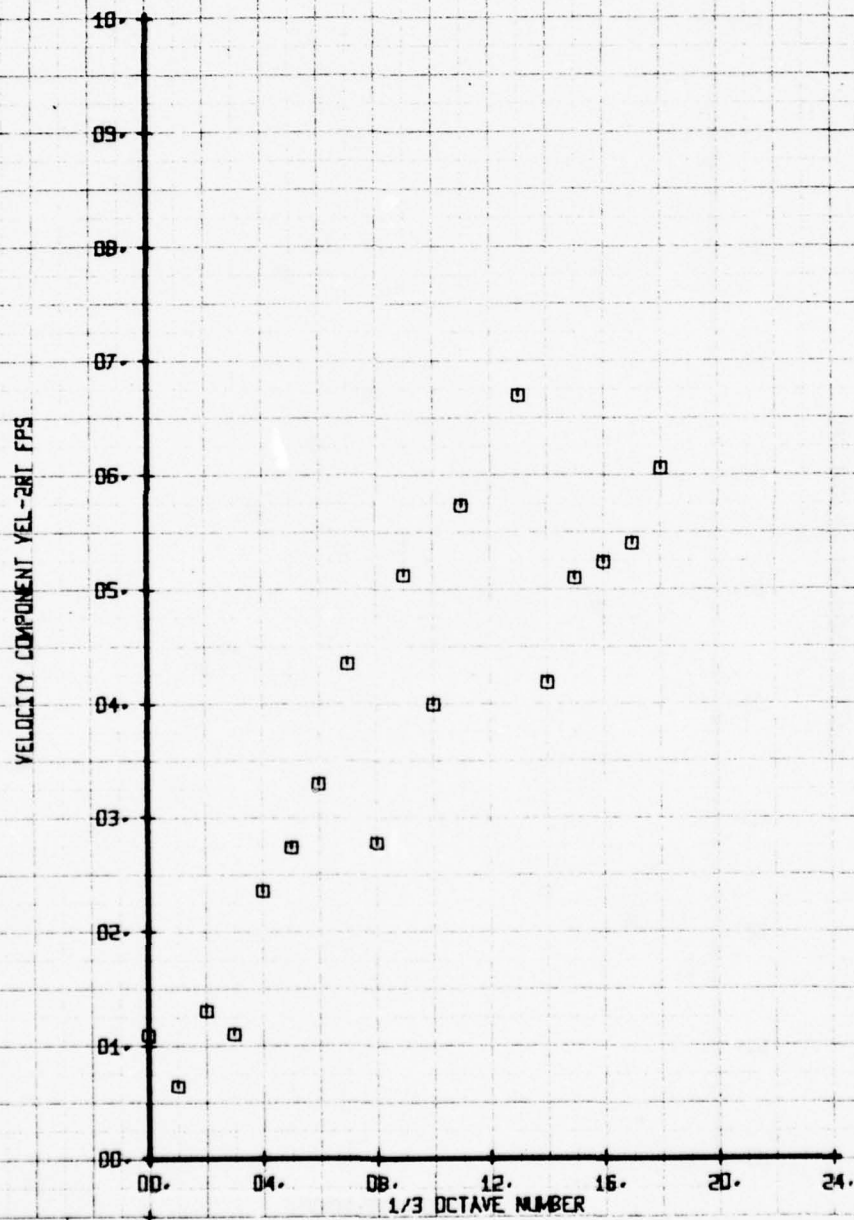
1/3 OCTAVE NUMBER

350

ET 10
 WT 169

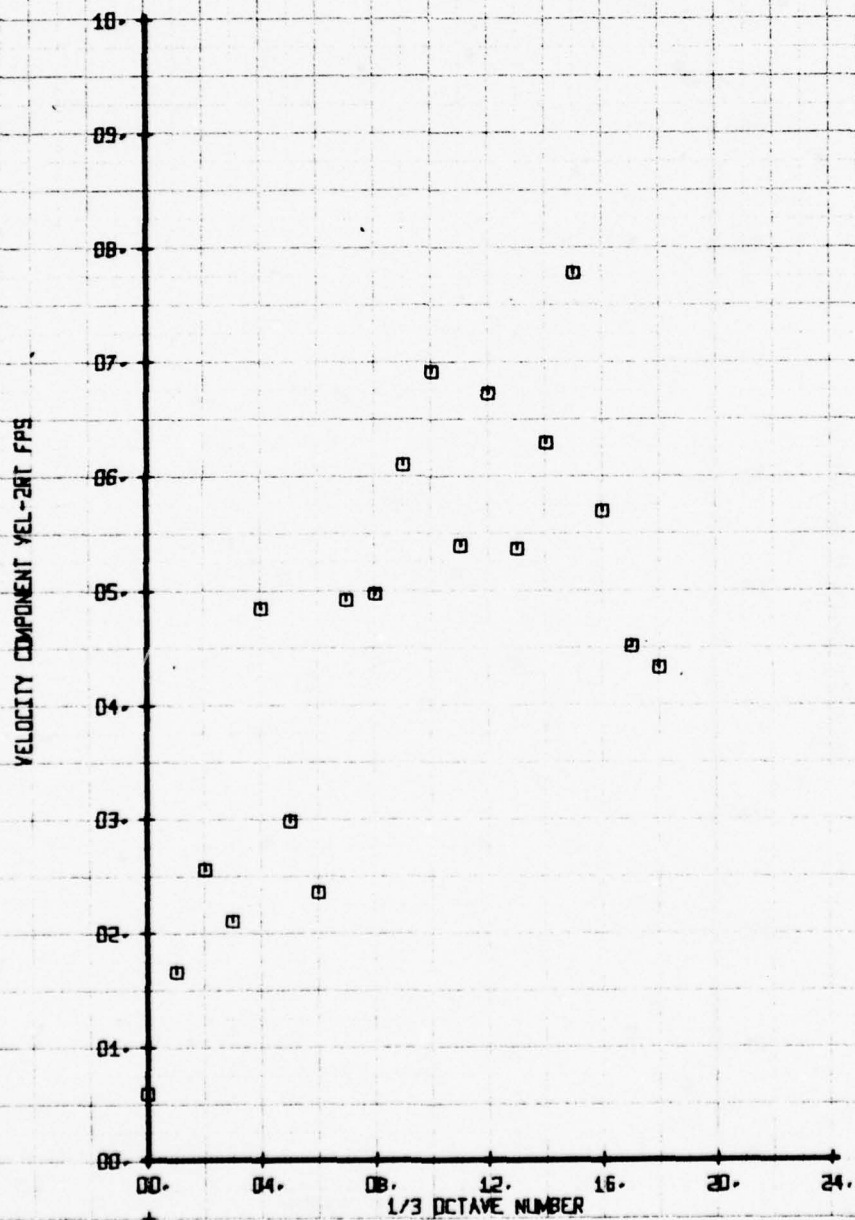
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. EFFECT OF STAB.
 RUN 121 TP 6

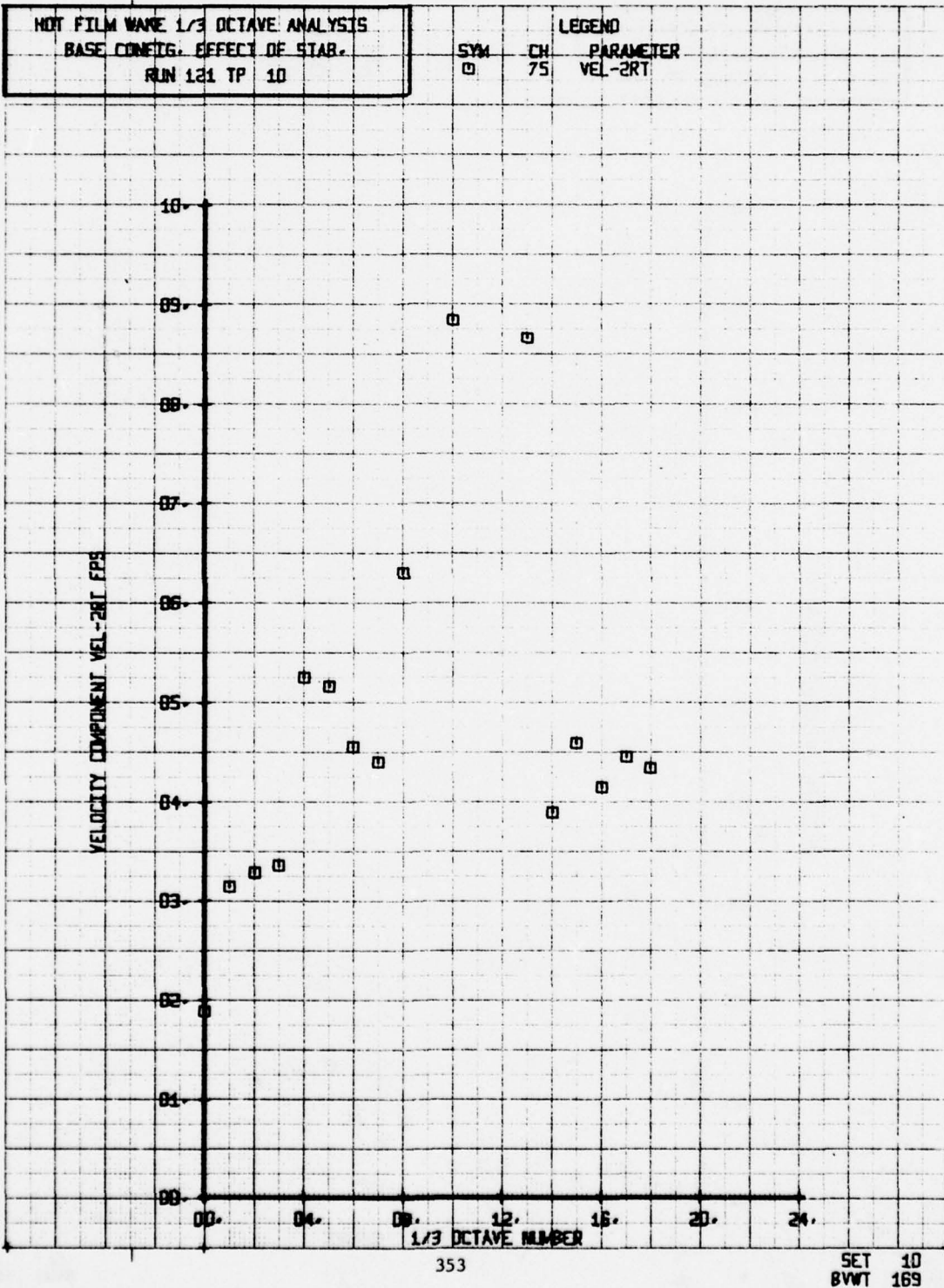
SYM CH PARAMETER
 □ 75 VEL-2RT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. EFFECT OF STAB,
 RUN 121 TP 8

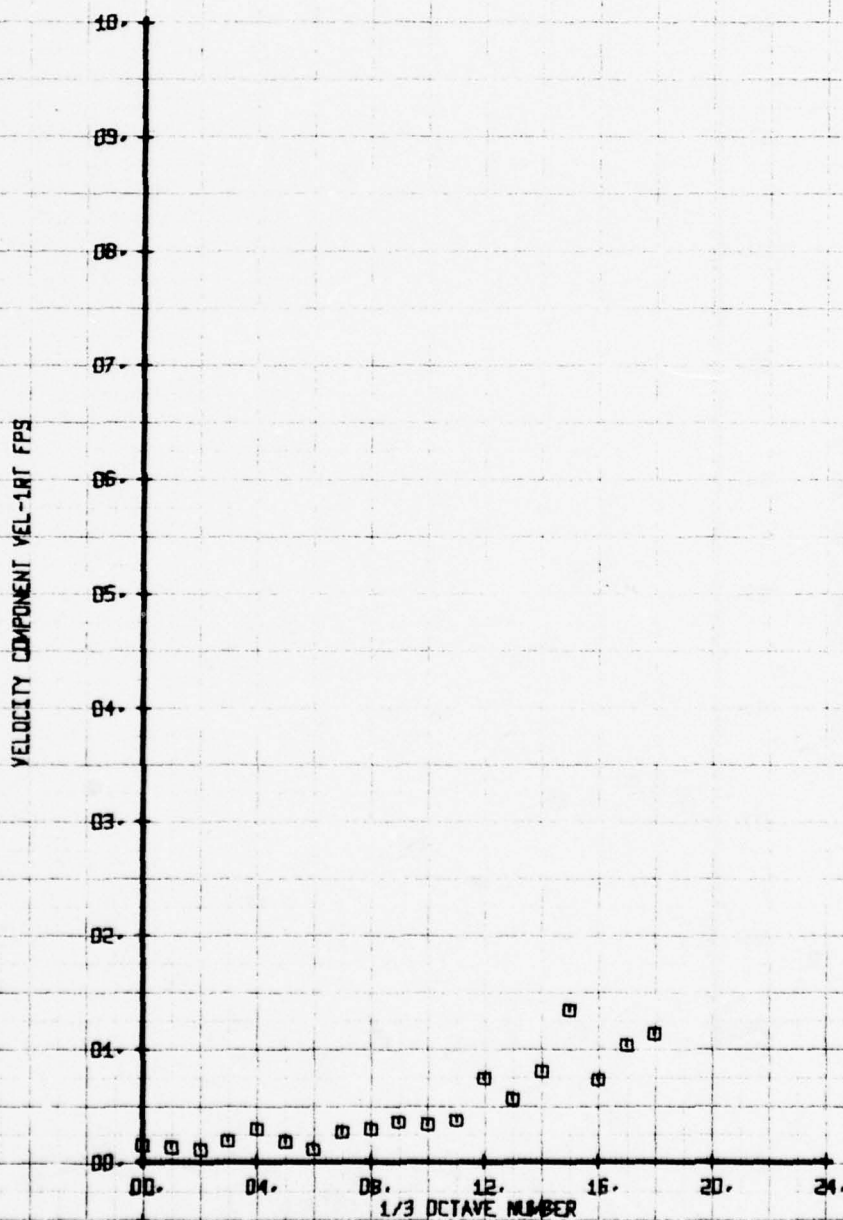
SYM	CH	LEGEND
□	75	PARAMETER VEL-2RT





HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. EFFECT OF STAB.
 RUN 121 TP 3

SYM	CH	PARAMETER
□	74	VEL-1RT



ET 10
 WT 169

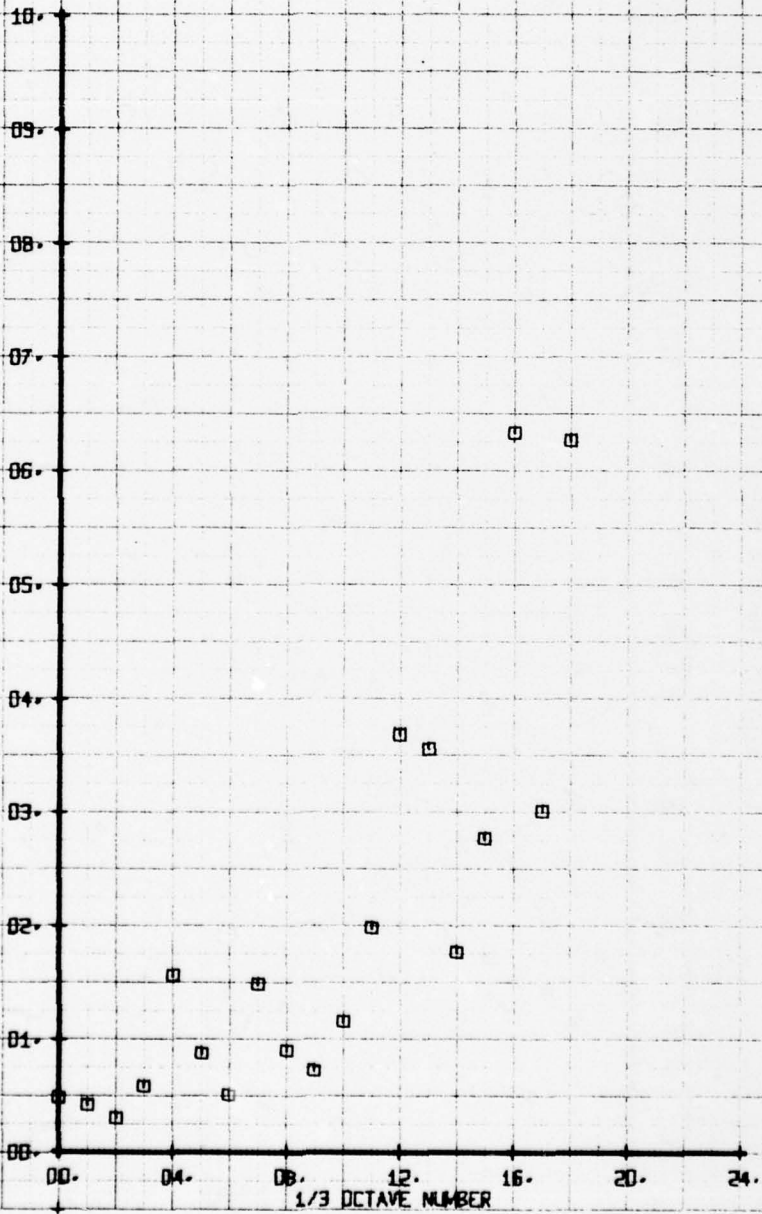
354

SET 10
 BVWT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. EFFECT OF STAB.
 RUN 121 TP 4

SYM	CH	PARAMETER
□	74	VEL-1RT

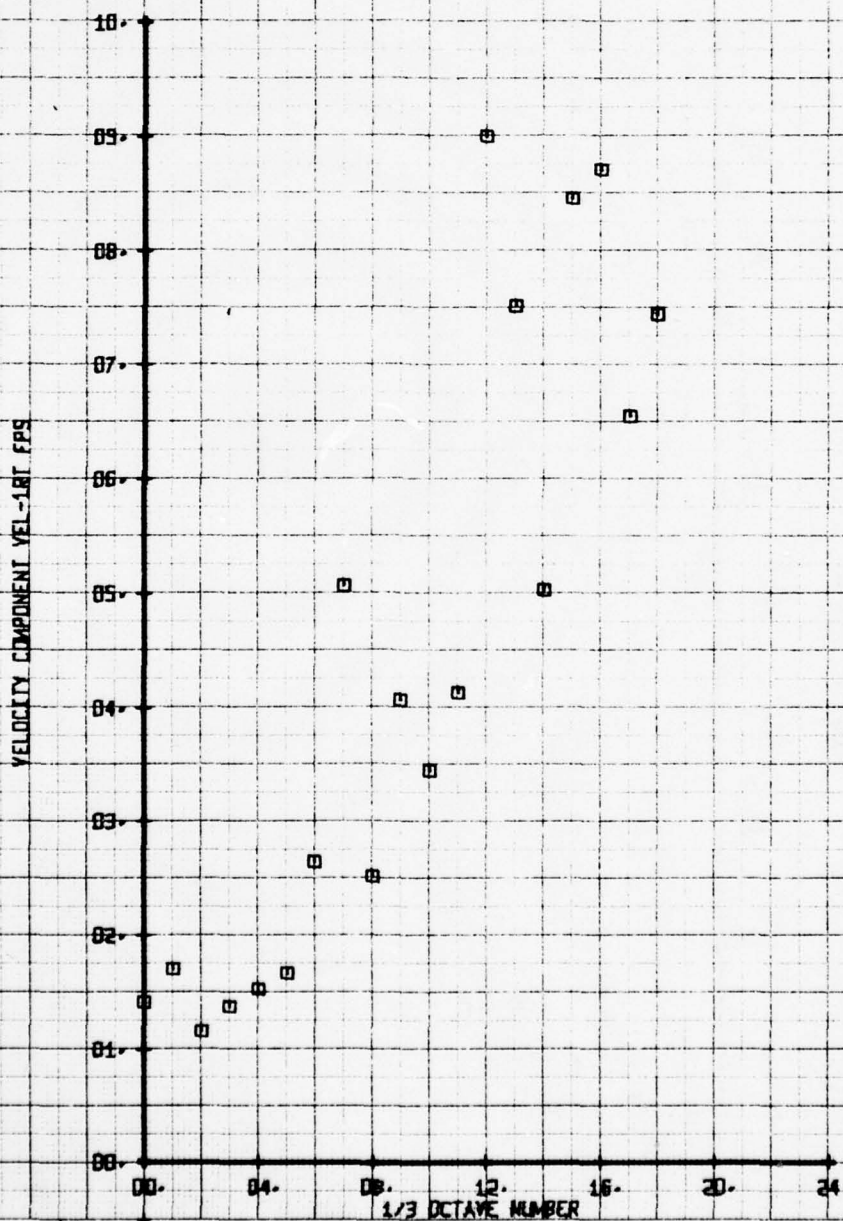
VELOCITY COMPONENT VEL-1RT FPS



ET 10
 WT 169

HOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. EFFECT OF STAB.
 RUN 121 TP 6

LEGEND
 SYM CH PARAMETER
 □ 74 VEL-1RT



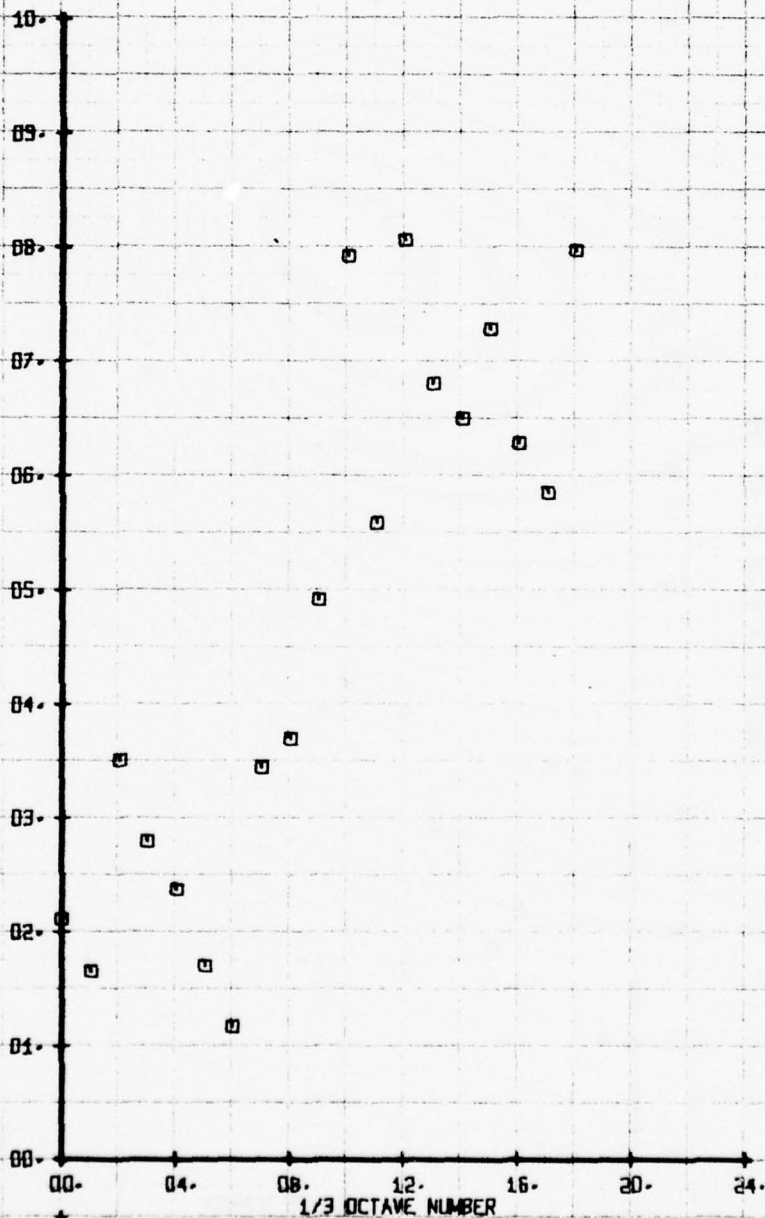
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
BASE CONFIG. EFFECT OF STAB.
RUN 121 TP B

SYM
□

CH
74

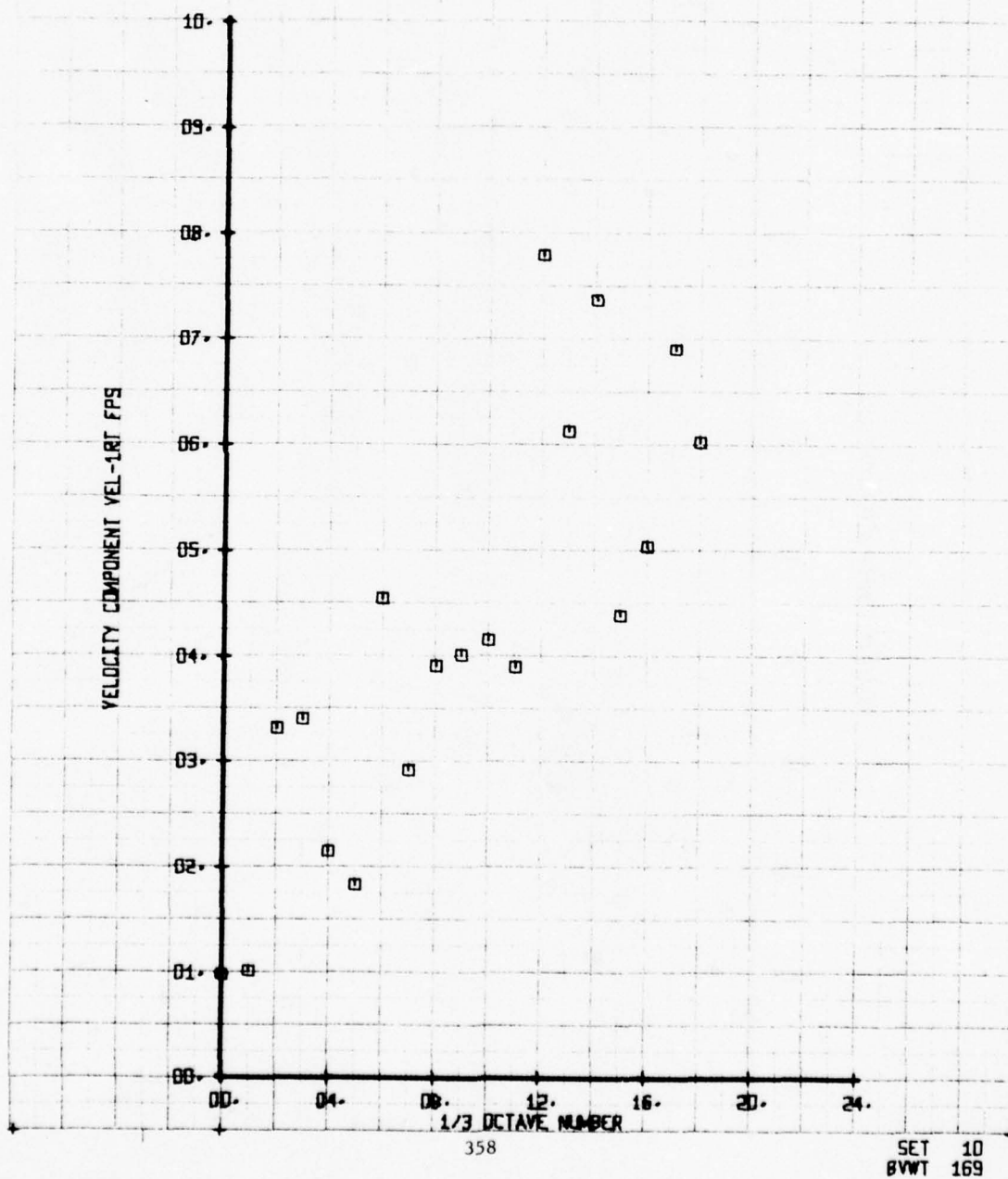
LEGEND
PARAMETER
VEL-1RT

VELOCITY COMPONENT VEL-1RT FPS



HOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. EFFECT OF STAB.
 RUN 121 TP 10

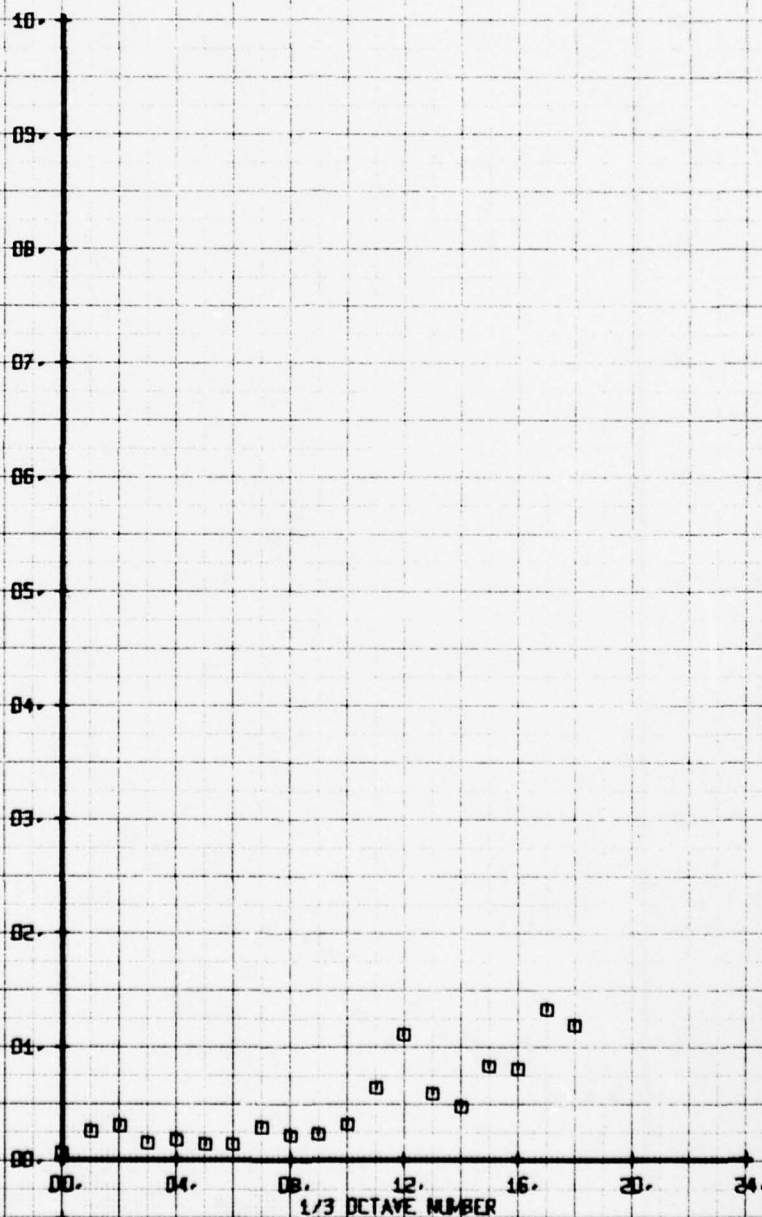
LEGEND
 SYM CH PARAMETER
 □ 74 VEL-1RT



MOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG, EFFECT OF STAB.
 RUN 121 TP 3

LEGEND
 SYM CH PARAMETER
 □ 73 VEL-1LT

VELOCITY COMPONENT VEL-1LT FPS



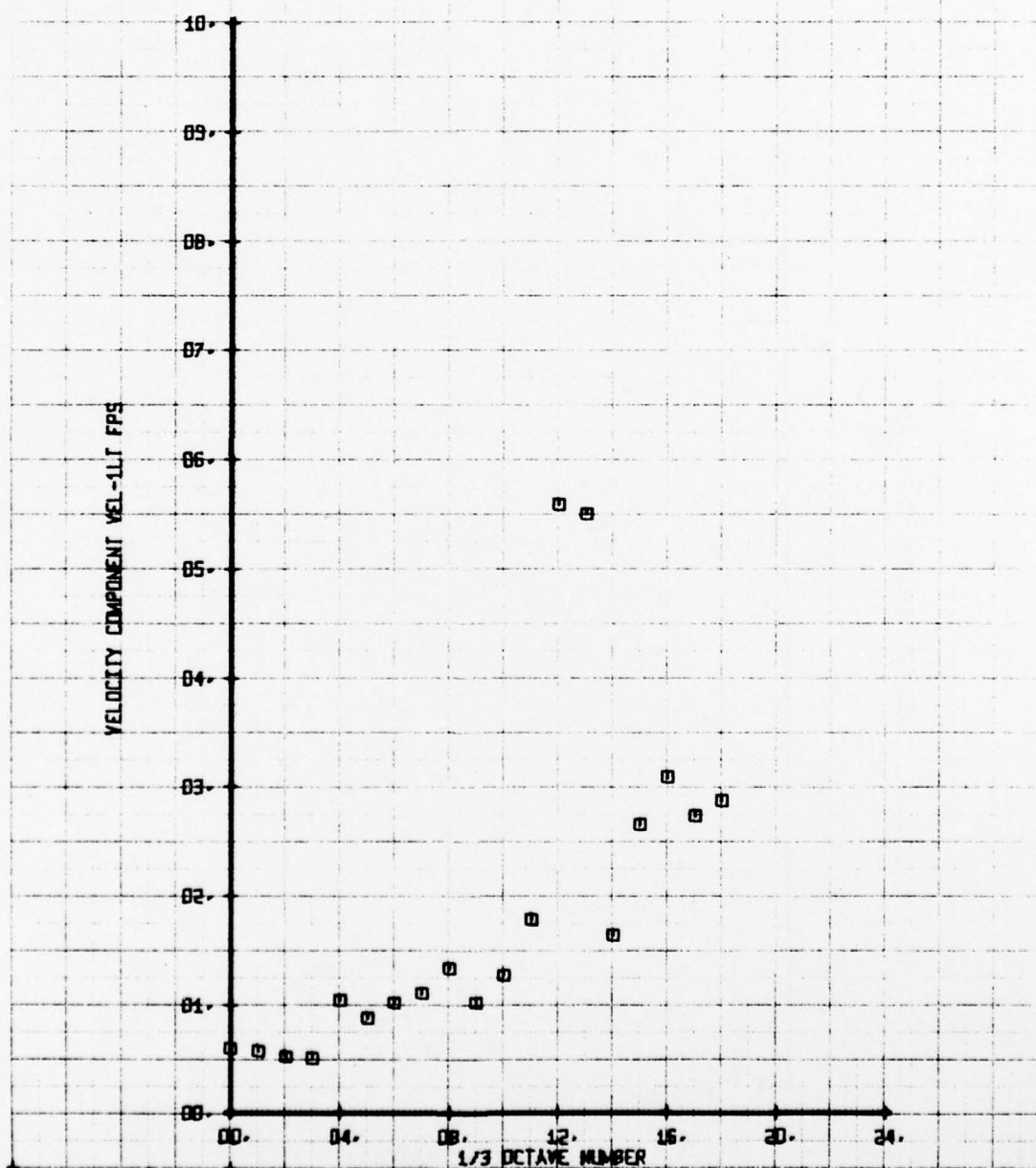
SET 10
 WT 169

359

SET 10
 BVWT 169

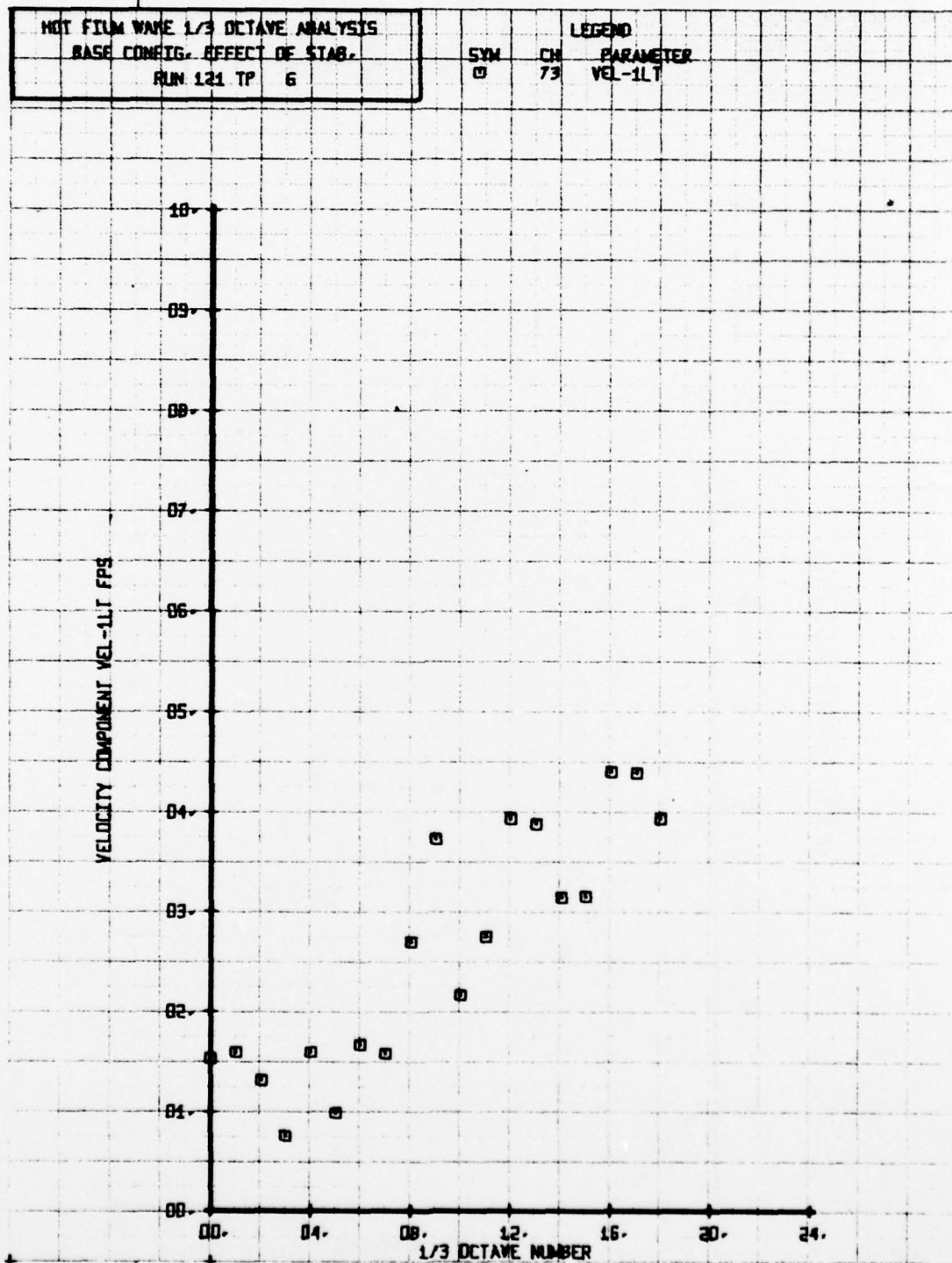
HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. EFFECT OF STAB.
 RUN 121 TP 4

LEGEND
 CH. 73
 PARAMETER
 VEL-1LT



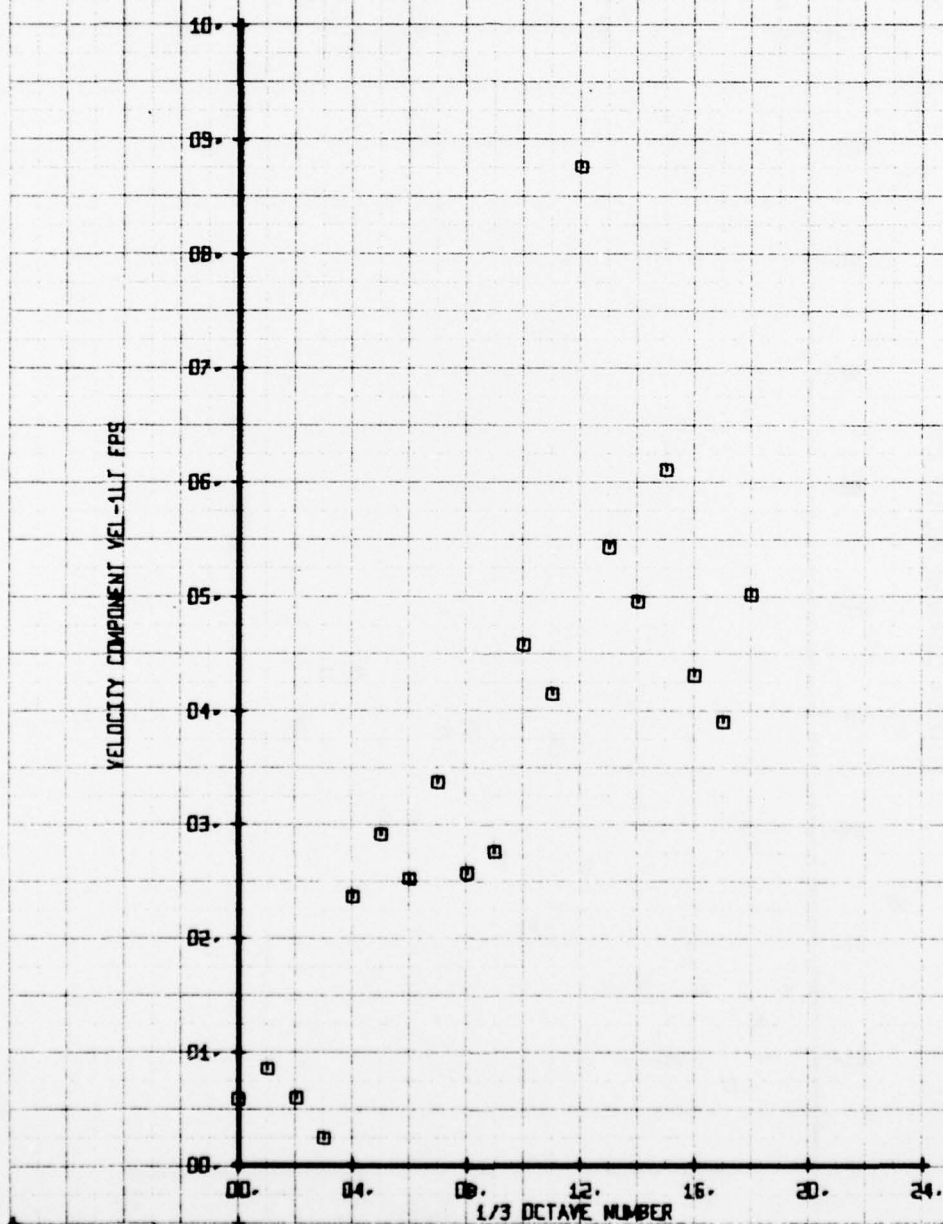
JET 10
 WT 169

360



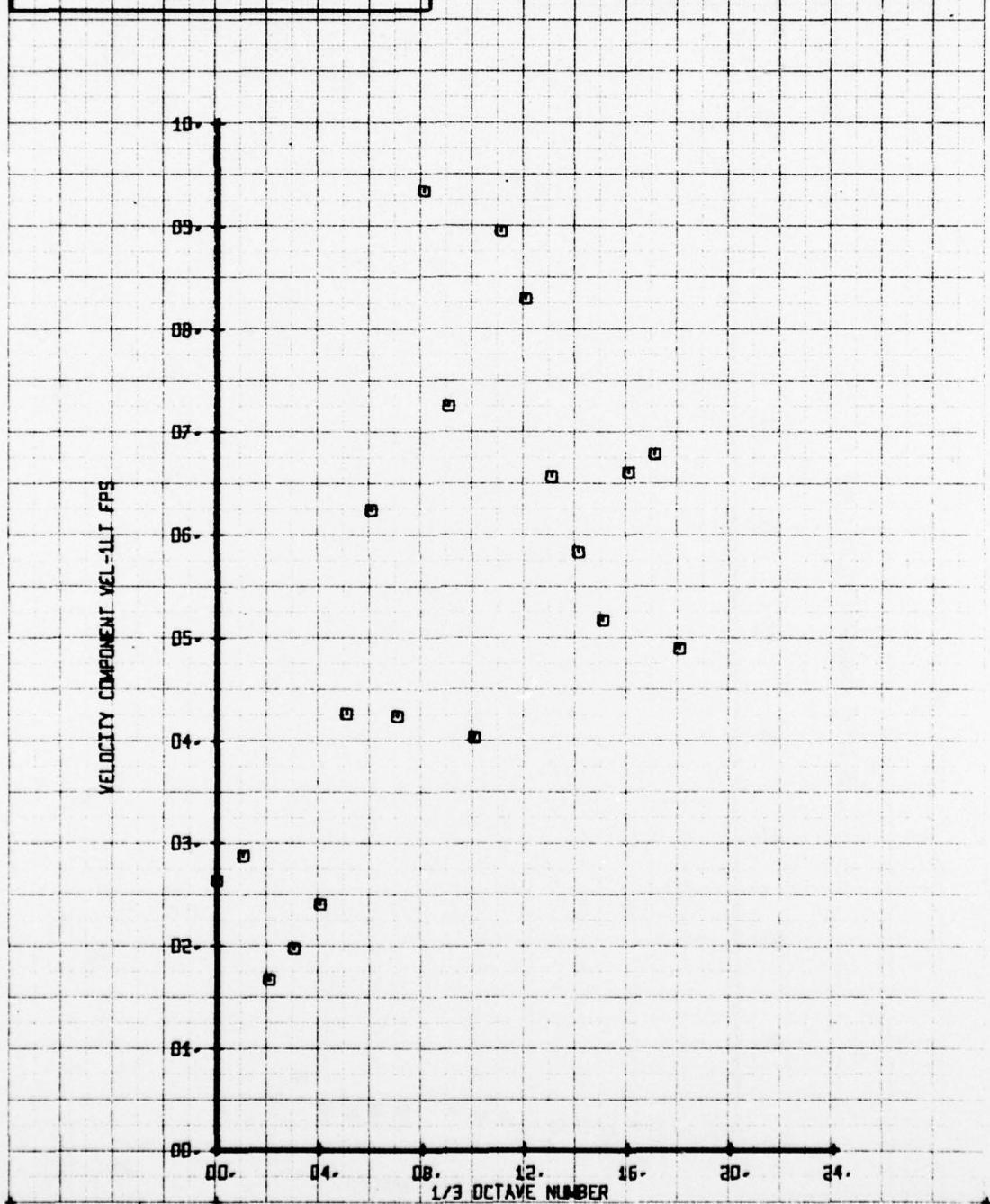
HOT FILM WAVE 1/3 OCTAVE ANALYSIS
BASE CORRECT. EFFECT OF STAB.
RUN 121 TP B

LEGEND
SYM CH PARAMETER
□ 73 VEL-1LT



NOT FROM WAVE 1/3 OCTAVE ANALYSIS
 BASE CORRIG. EFFECT OF STAB.
 RUN 121 TP 10

LEGEND
 SYM CH PARAMETER
 □ 73 VEL-1LT



363

SET 10
 BVWT 169

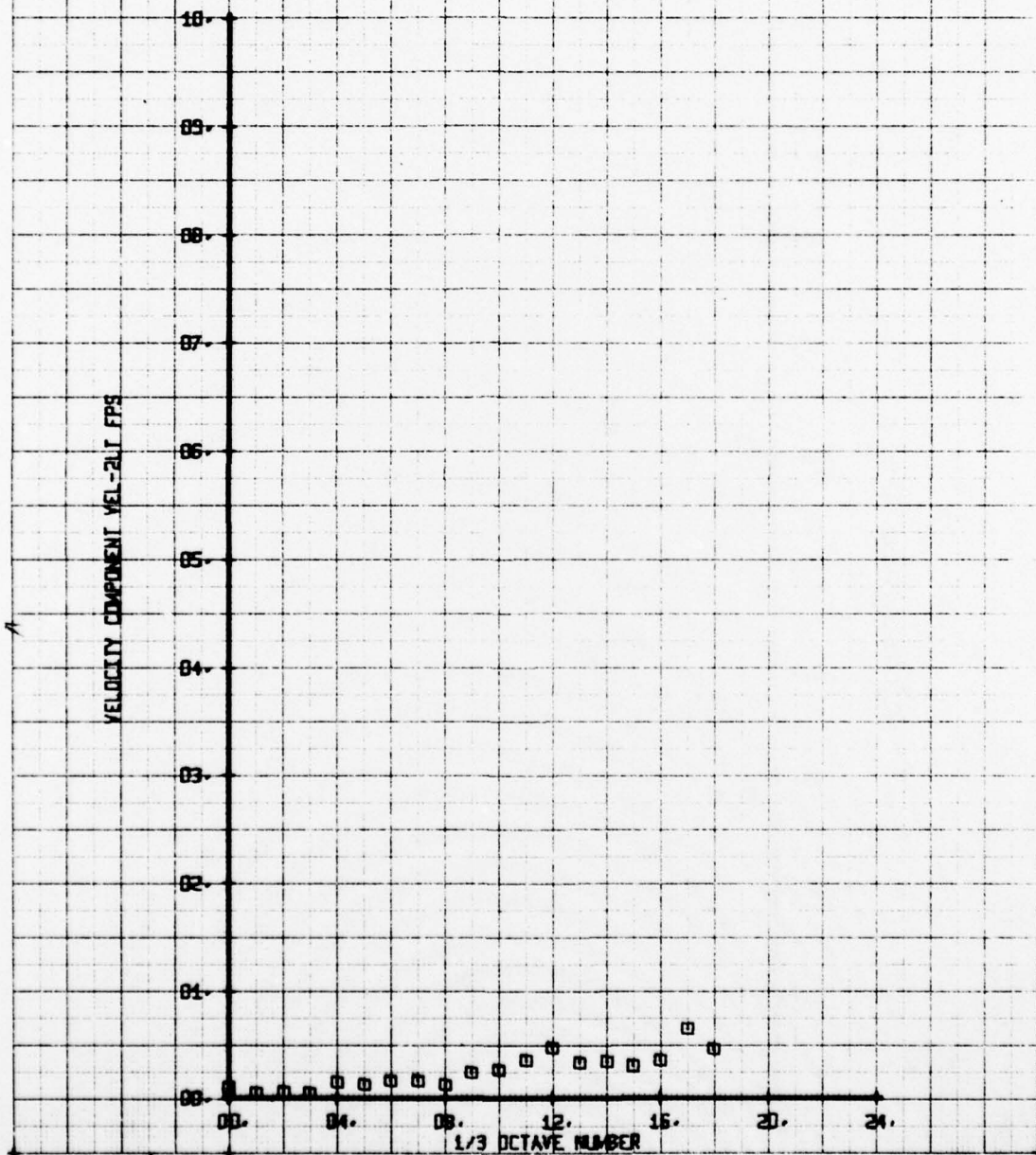
NOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CORRECT. EFFECT OF STAB.
 RUN 121 TP 3

SYM
 □

CH
 72

LEGEND
 PARAMETER
 VEL-2LT

VELOCITY COMPONENT VEL-2LT FPS



ET 10
 WT 169

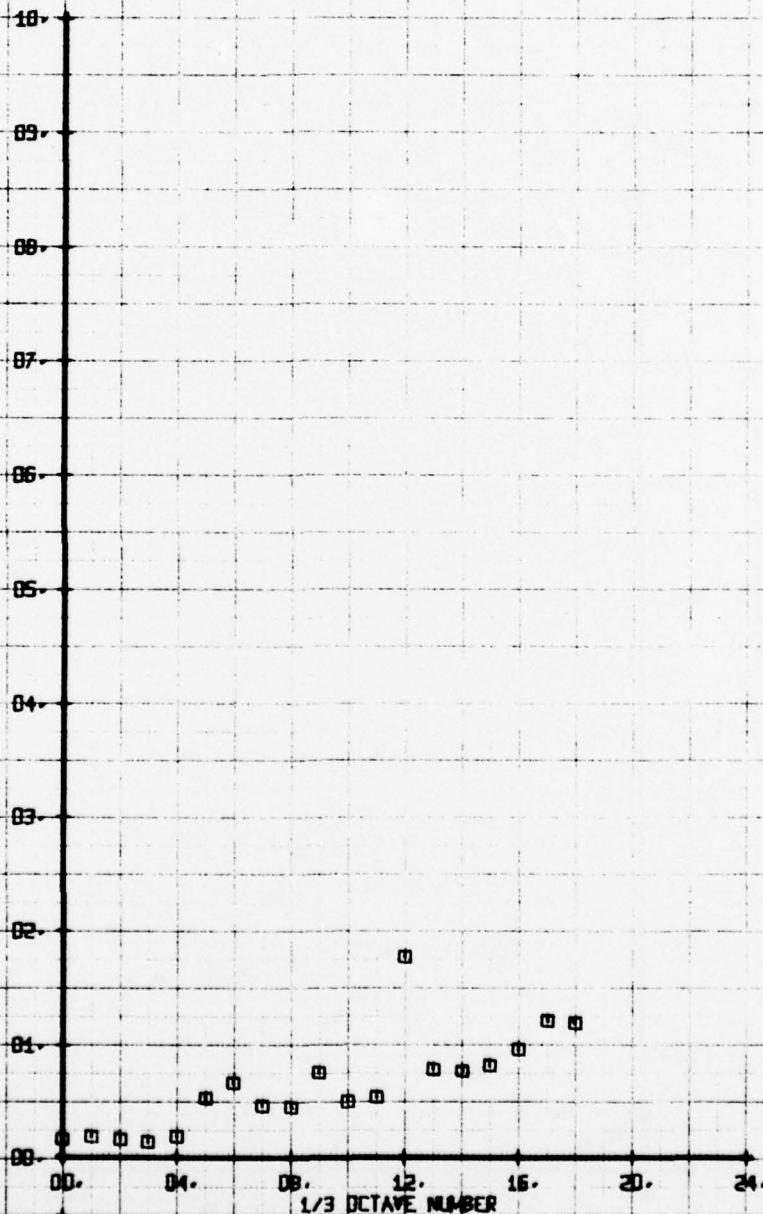
364

SET 10
 BVWT 169

HOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. EFFECT OF STAB.
 RUN 121 TP 4

SYM	CH	PARAMETER
□	72	VEL-2LT

VELOCITY COMPONENT VEL-2LT FPS



ET 10
 WT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS

BASE COND. EFFECT OF STAB.

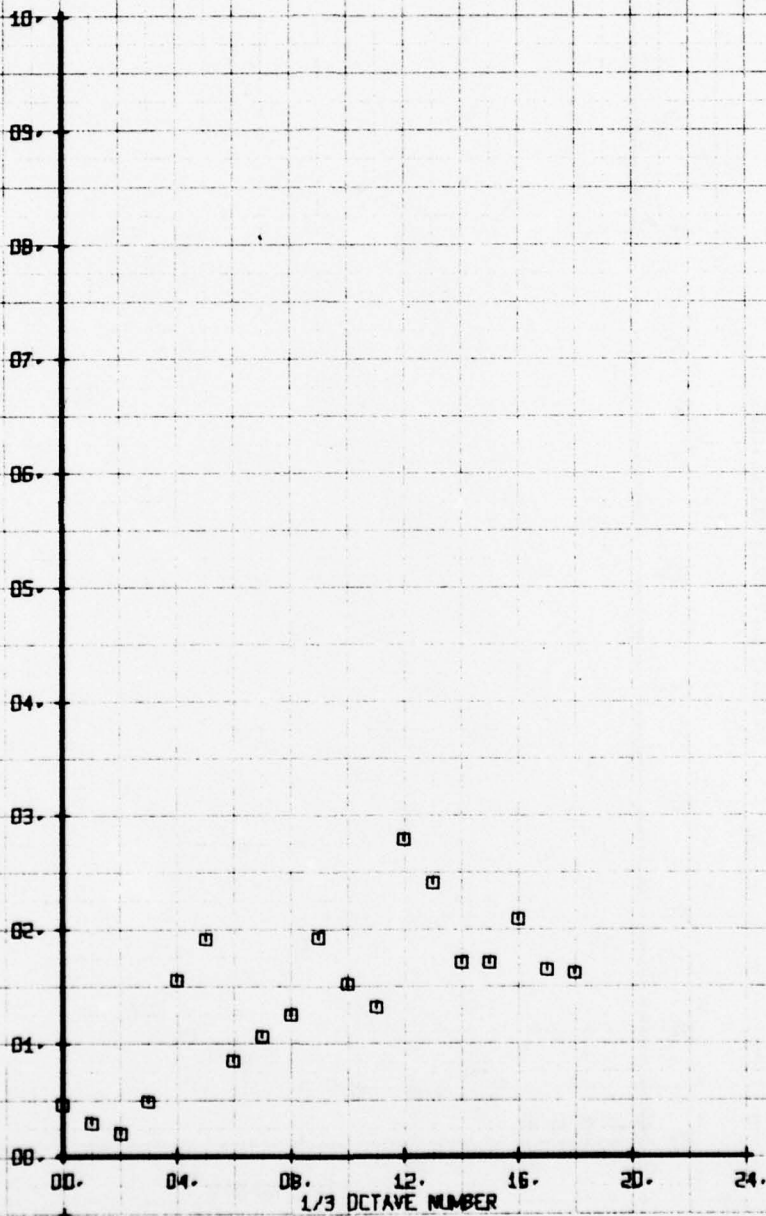
RUN 121 TP 6

SYM
□

CH
72

LEGEND
PARAMETER
VEL-2LT

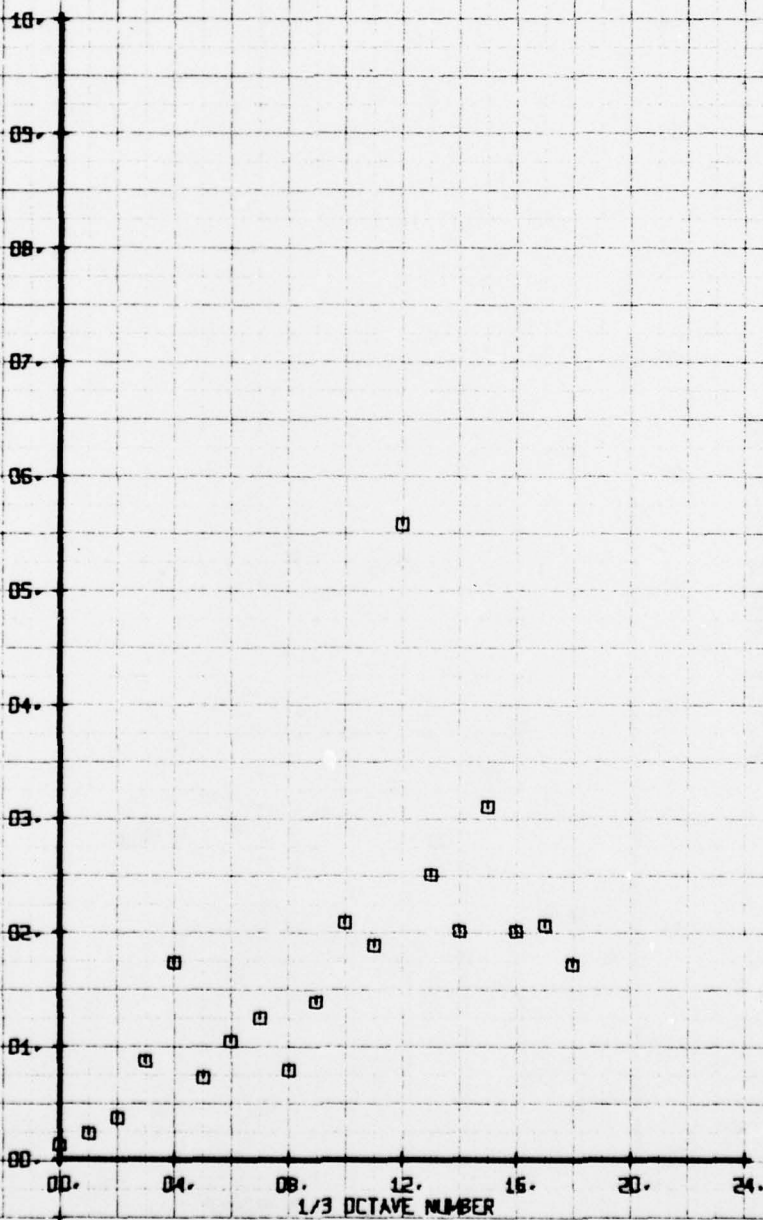
VELOCITY COMPONENT VEL-2LT FPS



HOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. EFFECT OF STAB.
 RUN 121 TP B

SYM	CH	PARAMETER
□	72	VEL-2LT

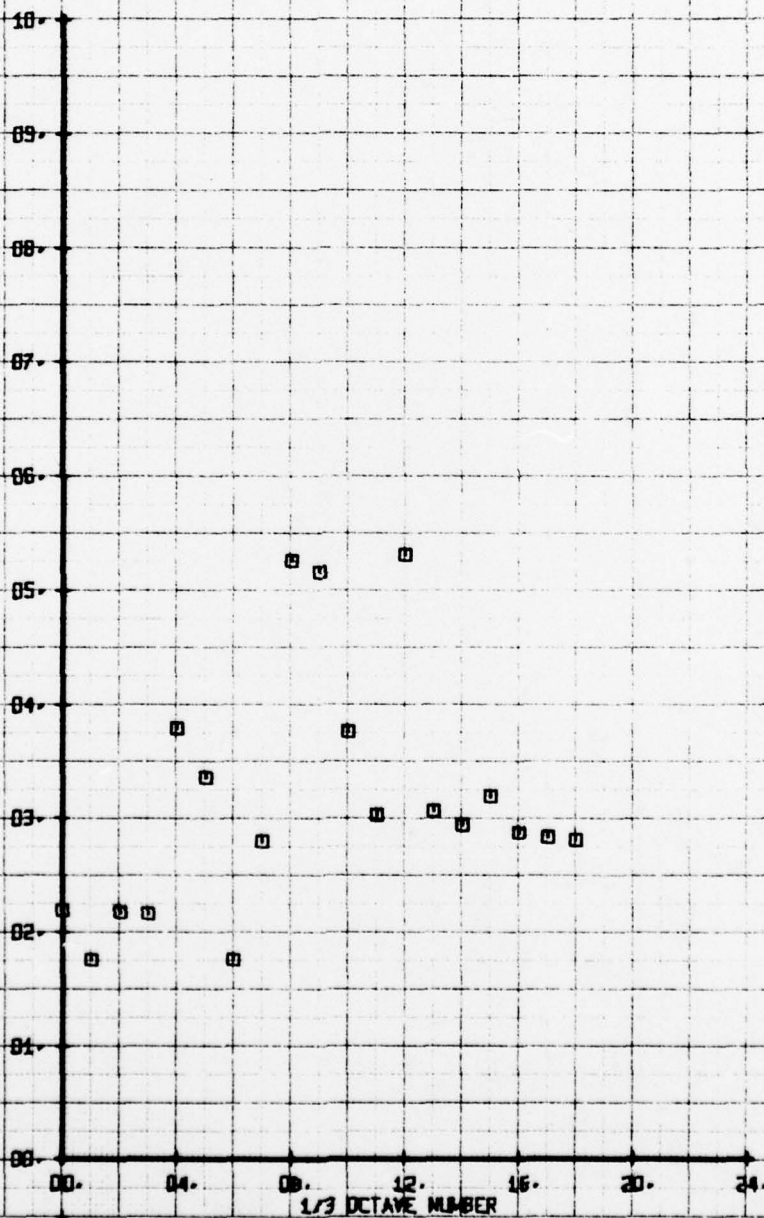
VELOCITY COMPONENT VEL-2LT FPS



HOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. EFFECT OF STAB.
 RUN 131 TP 10

SYM	CH	PARAMETER
□	72	VEL-2LT

VELOCITY COMPONENT VEL-2LT FPS

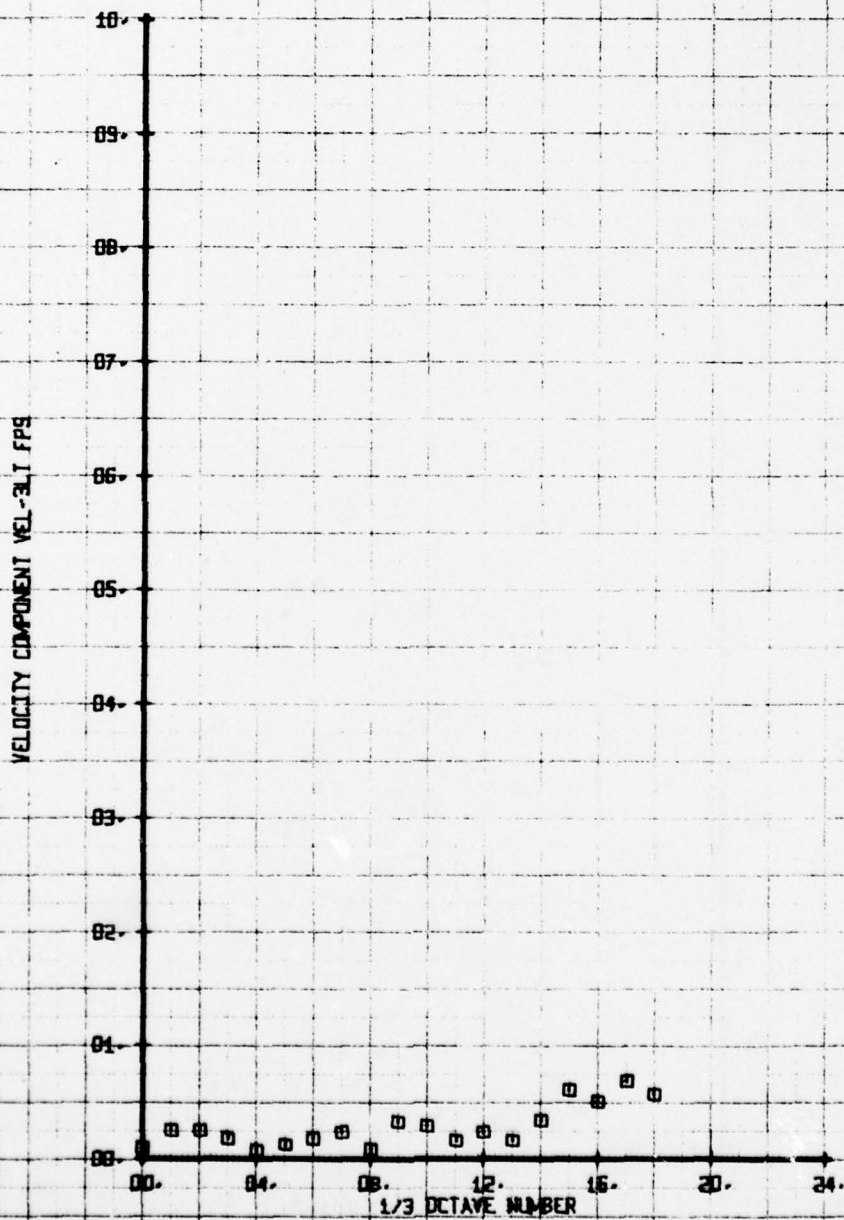


368

SET 10
 BWVT 169

HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. EFFECT OF STAB.
 RUN 121 TP 3

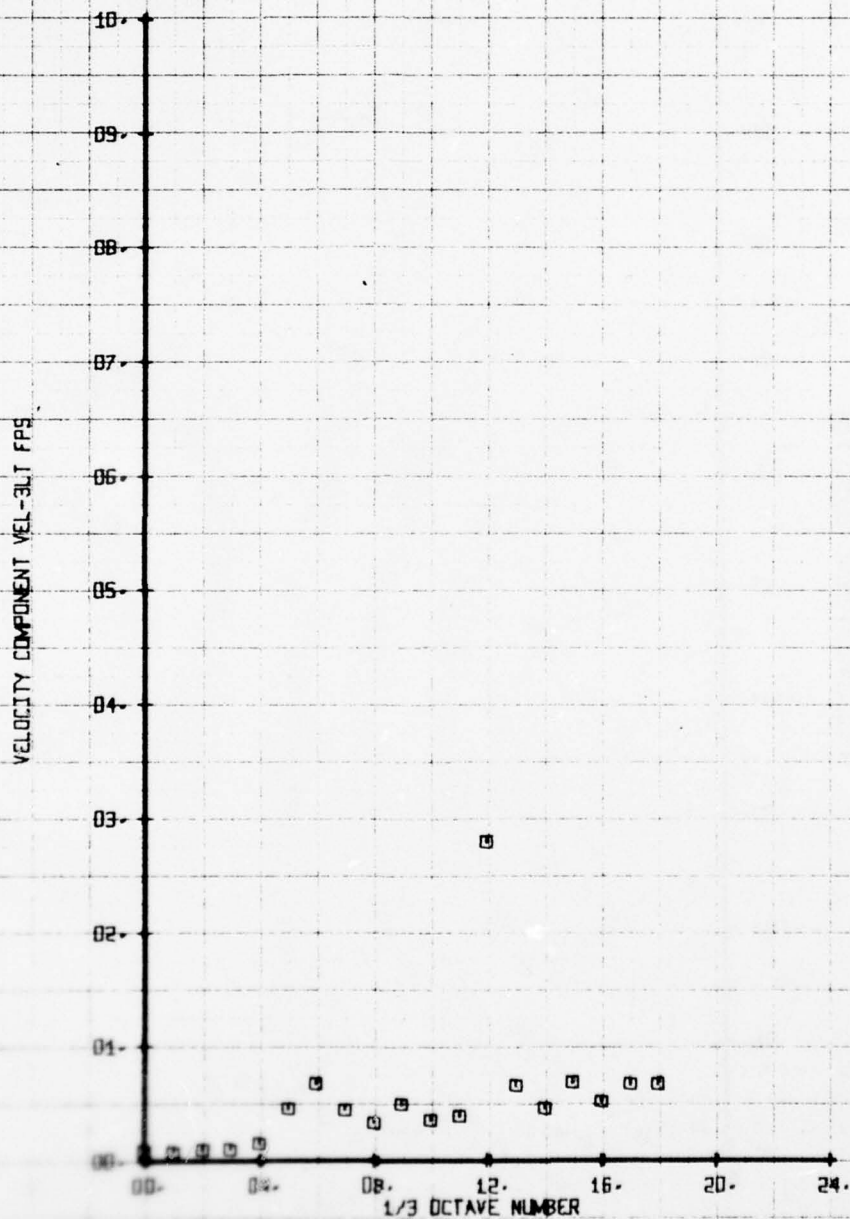
SYM	CH	PARAMETER
□	70	VEL-3LT



ET 10
 WT 169

NOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. EFFECT OF STAB.
 RUN 121 TP 4

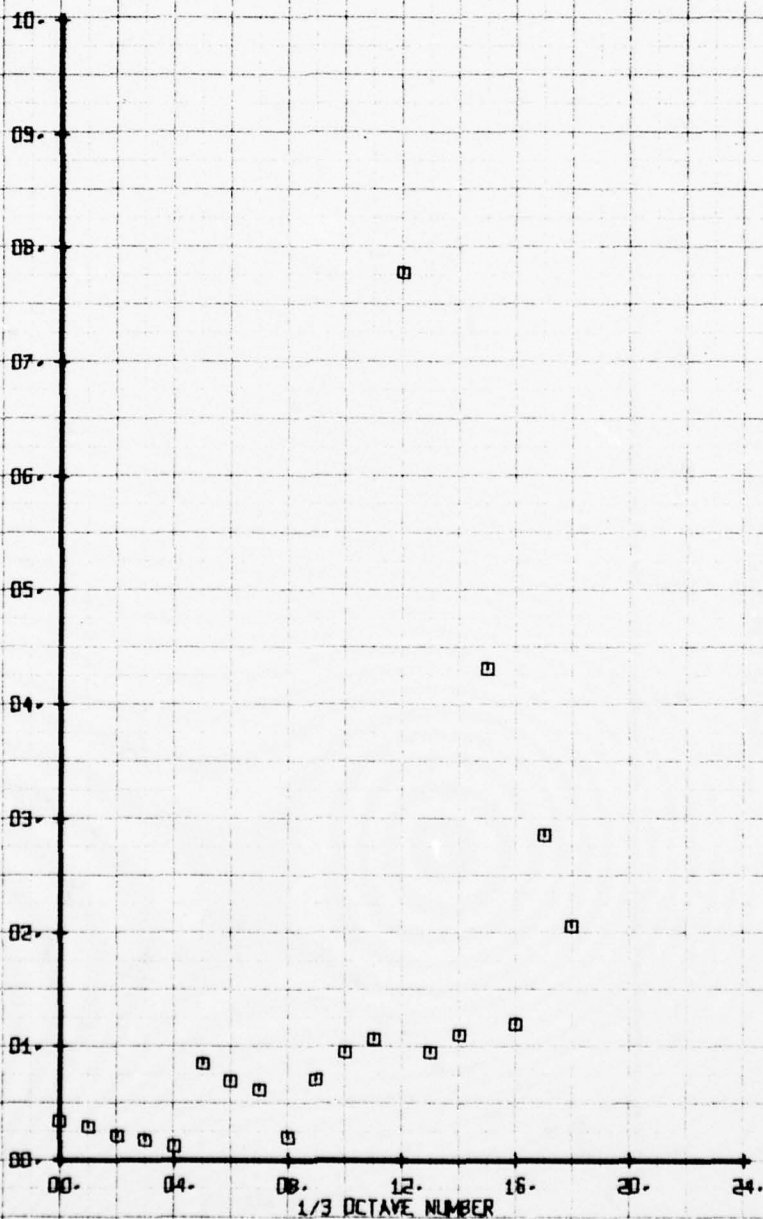
LEGEND
 SYM CH PARAMETER
 □ 70 VEL-3LT



HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. EFFECT OF STAB.
 RUN 121 TP 6

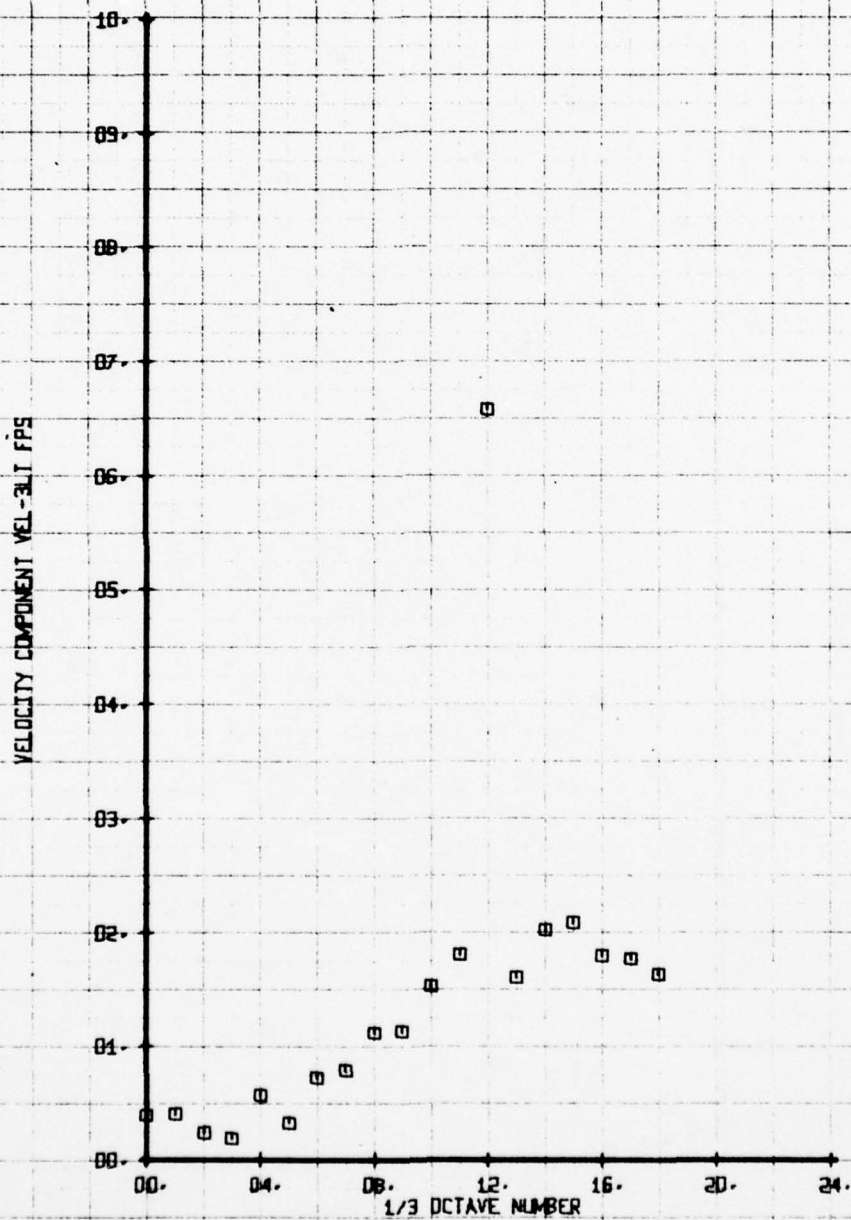
SYM	CH	PARAMETER
□	70	VEL-3LT

VELOCITY COMPONENT VEL-3LT FPS



NOT FILM WAVE 1/3 OCTAVE ANALYSIS
 BASE CONFIG. EFFECT OF STAB.
 RUN 121 TP B

LEGEND
 SYM CH PARAMETER
 □ 70 VEL-3LT

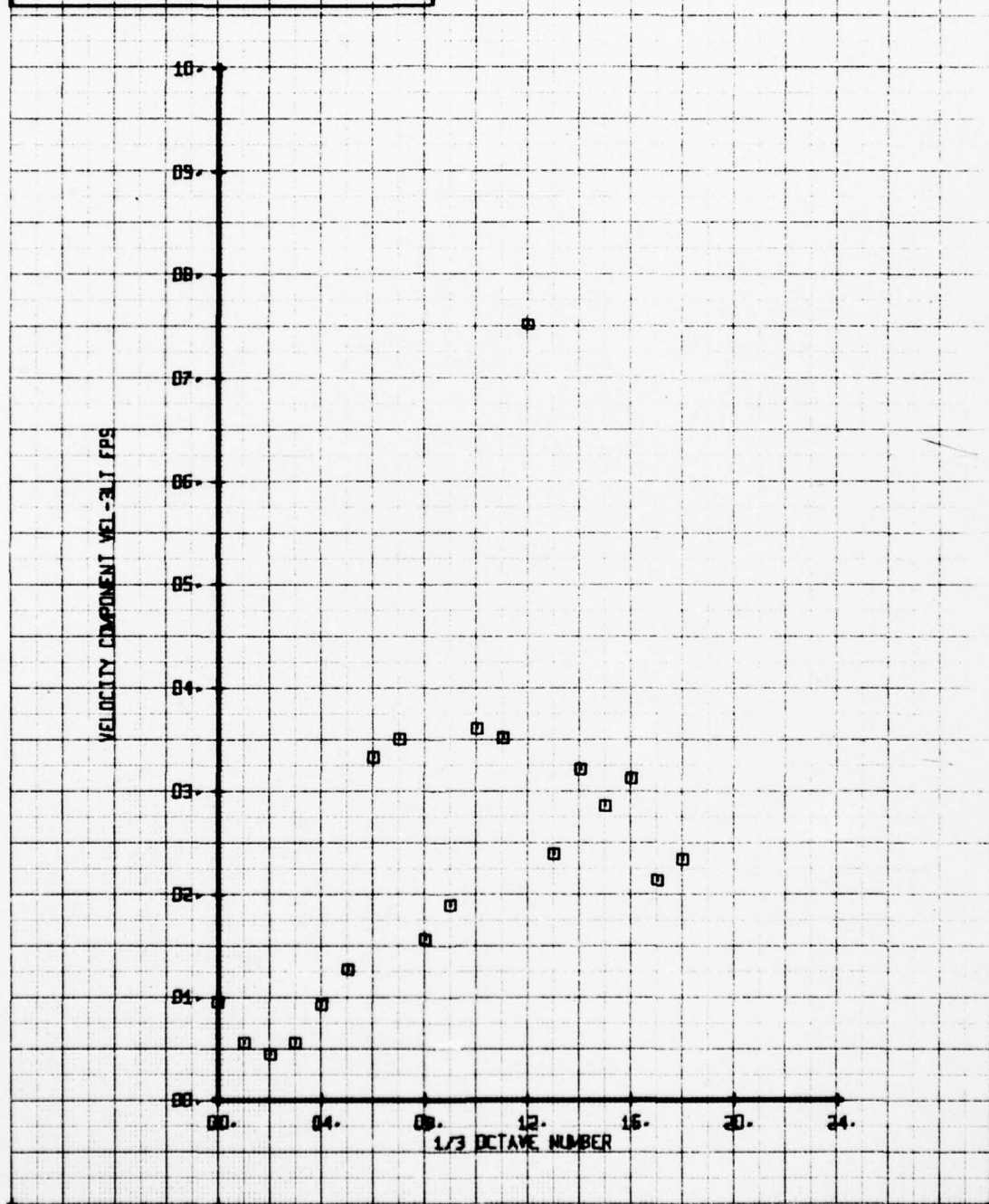


HOT FILM WAKE 1/3 OCTAVE ANALYSIS
 BASE CORRECTED. EFFECT OF STAB.
 RUN 121 TP 10

SYM
 0

CH
 70

LEGEND
 PARAMETER
 VEL-3LT



373

SET 10
 BWT 169

10804-78